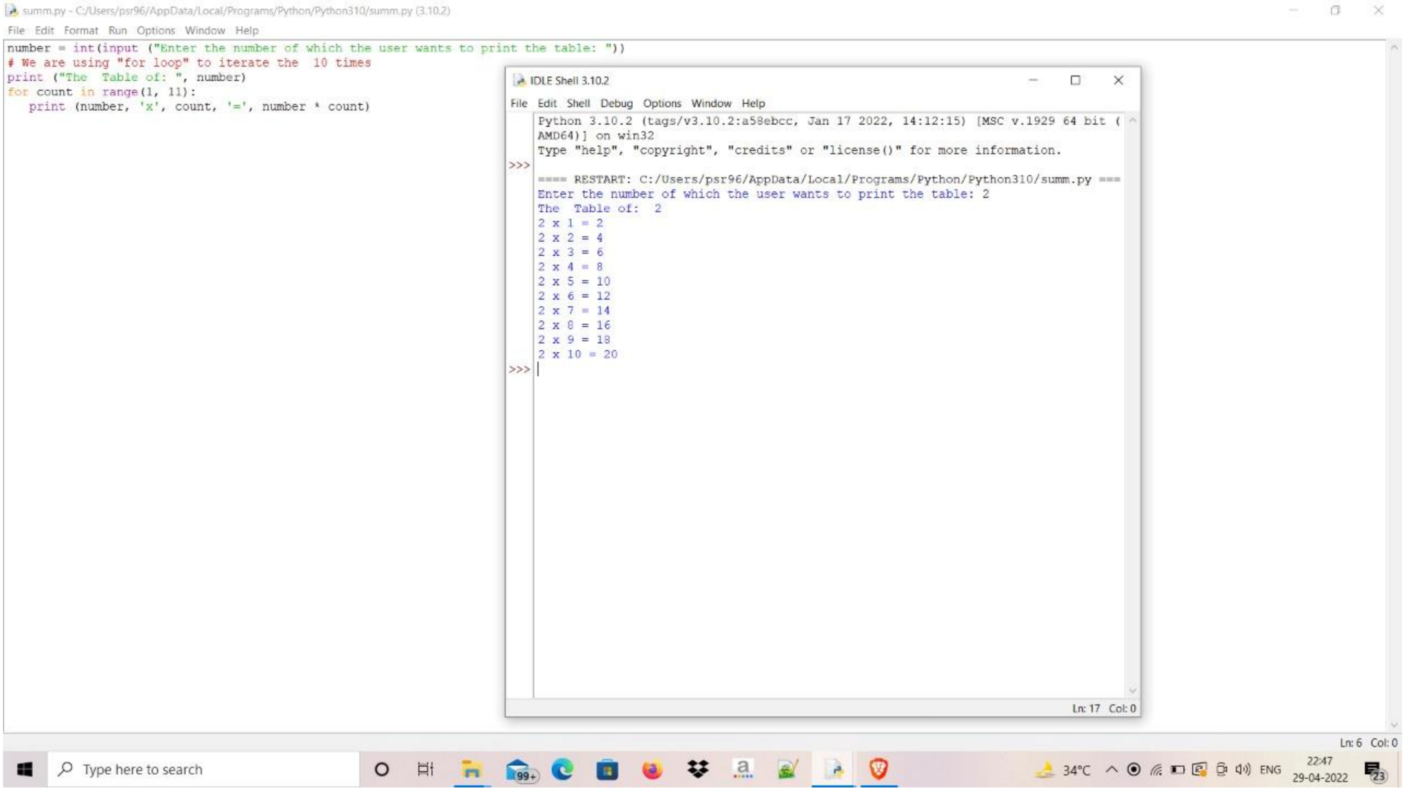
PRACTICAL - 1

Aim :- Write a Python program to display a table of a number.

Program :-

```
number = int(input ("Enter the number of which the user wants to print the table: "))

# We are using "for loop" to iterate the  10 times

print ("The  Table of: ", number)

for count in range(1, 11):

   print (number, 'x', count, '=', number * count)
```

Output..



summm.py - C:/Users/psr96/AppData/Local/Programs/Python/Python310/summ.py (3.10.2)

```
number = int(input ("Enter the number of which the user wants to print the table: "))
# We are using "for loop" to iterate the  10 times
print ("The  Table of: ", number)
for count in range(1, 11):
   print (number, 'x', count, '=', number * count)
```

IDLE Shell 3.10.2

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/summ.py ===
Enter the number of which the user wants to print the table: 2
The  Table of:  2
2 x 1 = 2
2 x 2 = 4
2 x 3 = 6
2 x 4 = 8
2 x 5 = 10
2 x 6 = 12
2 x 7 = 14
2 x 8 = 16
2 x 9 = 18
2 x 10 = 20
>>>
```

File Edit Format Run Options Window Help
File Edit Shell Debug Options Window Help
Ln: 17 Col: 0
Ln: 6 Col: 0
Type here to search
34°C ENG
22:47
29-04-2022

Result :- successfully executed

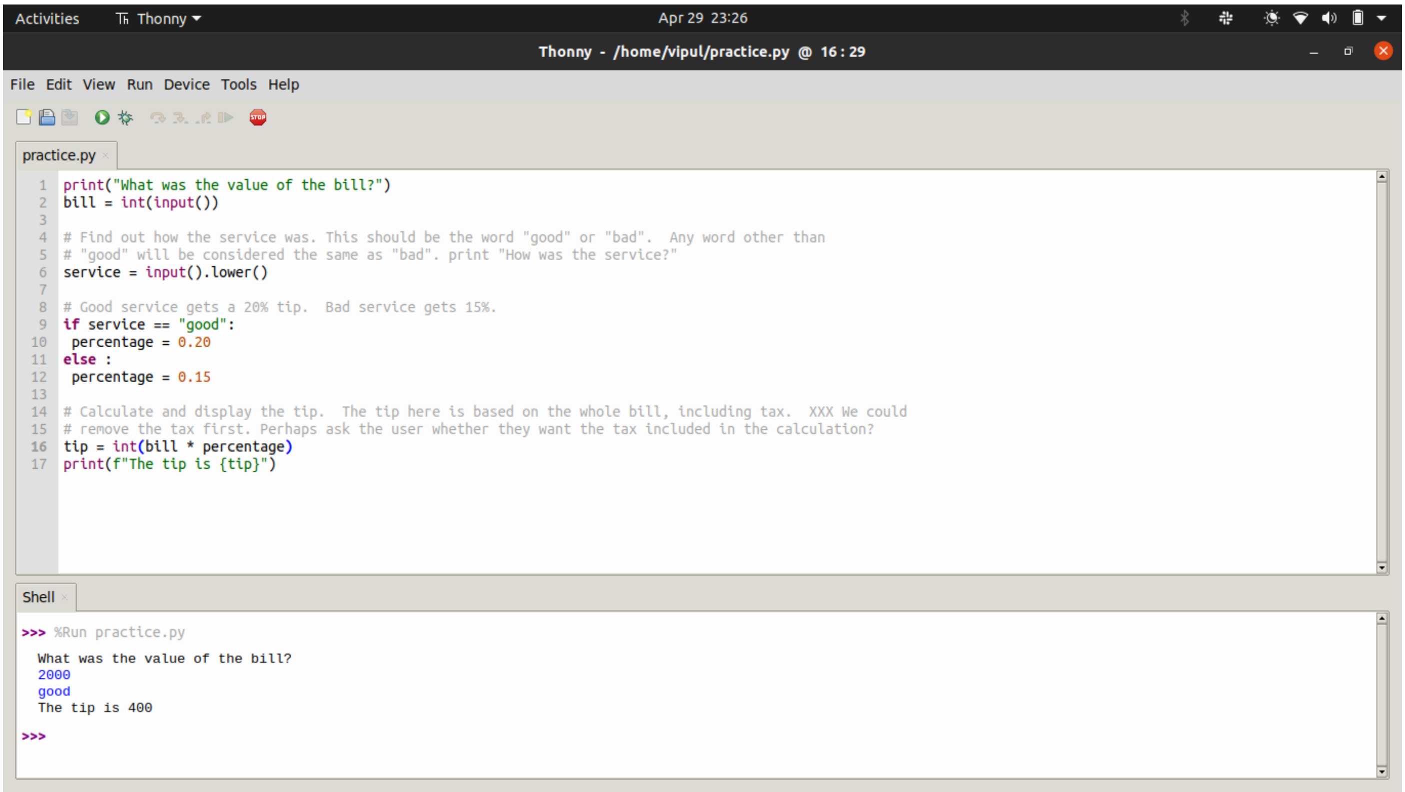
PRACTICAL - 2

Aim :- Write a Python program to calculate the tip from the bill and the quality of the service. if service is good then tip is 20% of the bill else it is 15% of the bill. Display the tip for the user.

Program

```
print("What was the value of the bill?")
bill = input()

# Find out how the service was. This should be the word "good" or "bad".  Any word other than
# "good" will be considered the same as "bad". print "How was the service?"
service = input()

# Good service gets a 20% tip.  Bad service gets 15%.
if service == "good":
percentage = 0.20
else:
 percentage = 0.15

# Calculate and display the tip.  The tip here is based on the whole bill, including tax.  XXX We
could
# remove the tax first. Perhaps ask the user whether they want the tax included in the
calculation?
tip = bill * percentage
print(tip)
```

output.


Activities
Thonny
Apr 29 23:26
Thonny - /home/vipul/practice.py @ 16 : 29
File Edit View Run Device Tools Help
practice.py
Shell

```
print("What was the value of the bill?")
bill = int(input())

# Find out how the service was. This should be the word "good" or "bad".  Any word other than
# "good" will be considered the same as "bad". print "How was the service?"
service = input().lower()

# Good service gets a 20% tip.  Bad service gets 15%.
if service == "good":
 percentage = 0.20
else :
 percentage = 0.15

# Calculate and display the tip.  The tip here is based on the whole bill, including tax.  XXX We could
# remove the tax first. Perhaps ask the user whether they want the tax included in the calculation?
tip = int(bill * percentage)
print(f"The tip is {tip}")
```

```
>>> %Run practice.py

  What was the value of the bill?
  2000
  good
  The tip is 400

>>>
```

Result :- succesfully executed

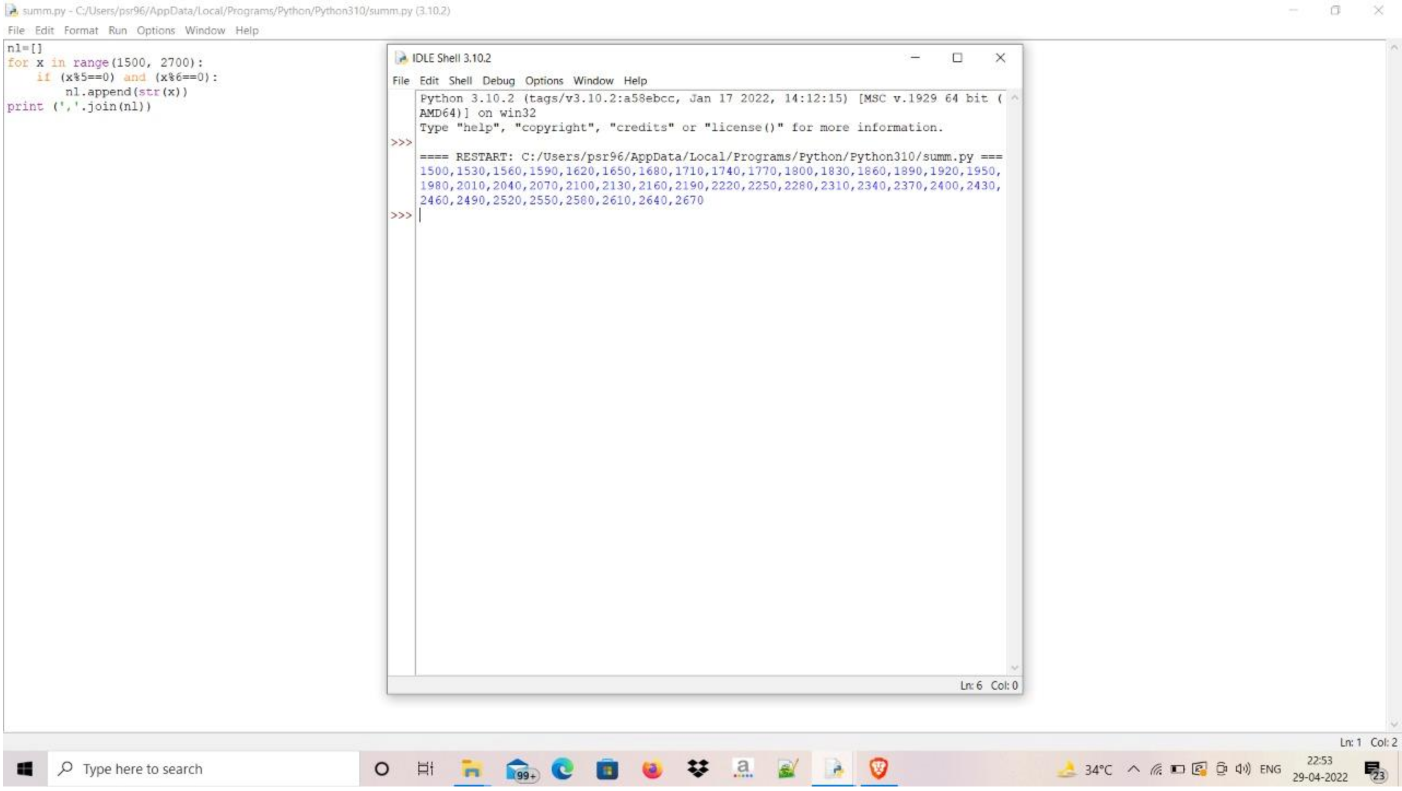
PRACTICAL - 3

Aim :- Write a Python program to find those numbers which are divisible by 5 and multiple of 6, between 1500 and 2700 (both included). Also print the sum of all numbers.

Program

```
nl=[]
for x in range(1500, 2700):
    if (x%5==0) and (x%6==0):
        nl.append(str(x))
print (','.join(nl))
```

Output..



summ.py - C:/Users/psr96/AppData/Local/Programs/Python/Python310/summ.py (3.10.2)
File Edit Format Run Options Window Help
IDLE Shell 3.10.2
File Edit Shell Debug Options Window Help
Ln: 6 Col: 0
Ln: 1 Col: 2
Type here to search
34°C ENG
22:53
29-04-2022

```
nl=[]
for x in range(1500, 2700):
    if (x%5==0) and (x%6==0):
        nl.append(str(x))
print (','.join(nl))
```

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/summ.py ===
1500,1530,1560,1590,1620,1650,1680,1710,1740,1770,1800,1830,1860,1890,1920,1950,
1980,2010,2040,2070,2100,2130,2160,2190,2220,2250,2280,2310,2340,2370,2400,2430,
2460,2490,2520,2550,2580,2610,2640,2670
>>> |
```

Result :- succesfully execu

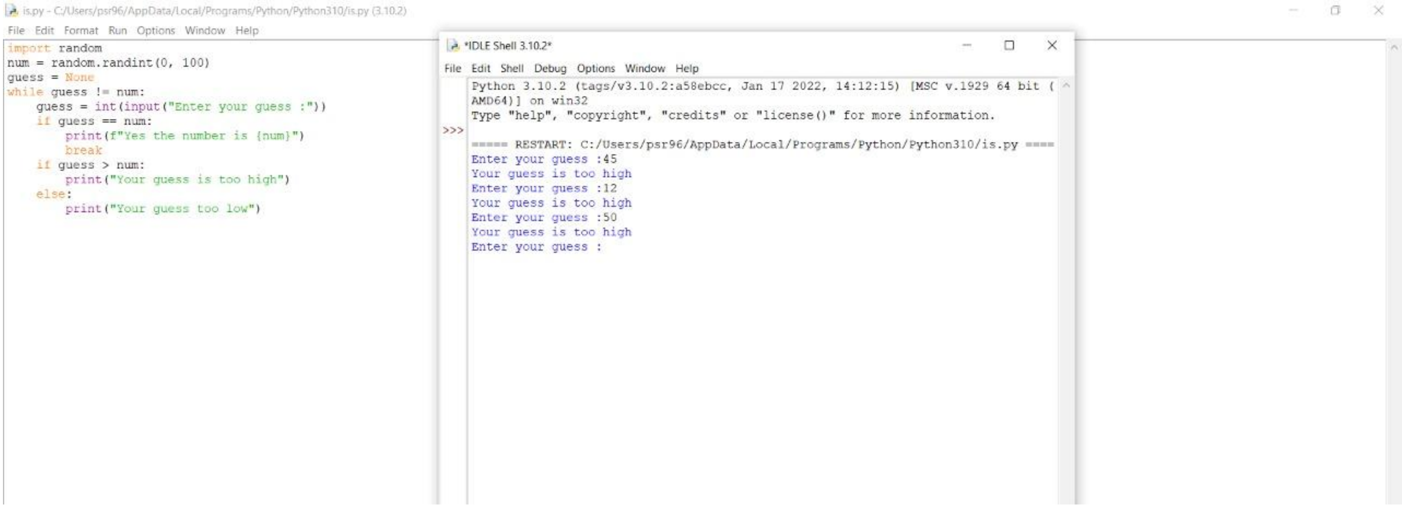
PRACTICAL - 4

Aim :- Write a Python program that randomly generates an integer between 0 and 100, inclusive. The program prompts the user to enter a number continuously until the number matches the randomly generated number. For each user input, the program tells the user whether the input is too low or too high, so the user can choose the next input intelligently. Also print the number of attempts to get the success.

Program

```
import random
num = random.randint(0, 100)
guess = None
while guess != num:
    guess = int(input("Enter your guess :"))
    if guess == num:
        print(f"Yes the number is {num}")
        break
    if guess > num:
        print("Your guess is too high")
    else:
        print("Your guess too low")
```

Output..



is.py - C:/Users/psr96/AppData/Local/Programs/Python/Python310/is.py (3.10.2)
File Edit Format Run Options Window Help
IDLE Shell 3.10.2
File Edit Shell Debug Options Window Help

```
import random
num = random.randint(0, 100)
guess = None
while guess != num:
    guess = int(input("Enter your guess :"))
    if guess == num:
        print(f"Yes the number is {num}")
        break
    if guess > num:
        print("Your guess is too high")
    else:
        print("Your guess too low")
```

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/is.py ====
Enter your guess :45
Your guess is too high
Enter your guess :12
Your guess is too high
Enter your guess :50
Your guess is too high
Enter your guess :
```

Result :- succesfully executed.

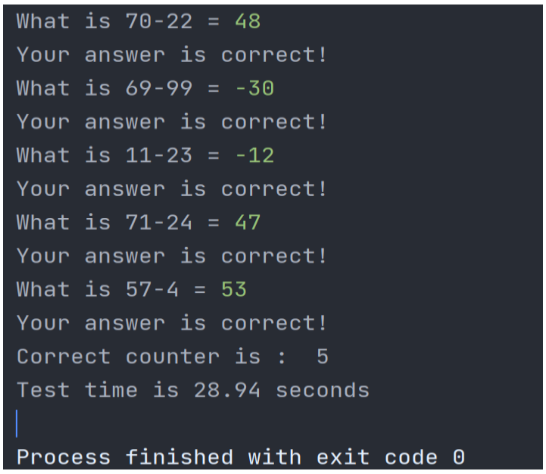
PRACTICAL - 5

Aim:- **Write a Python program that generates five questions and reports the number of the correct answers after a student answers all five questions.**

Program

```
import random
import time
t=time.perf_counter()
c=0
for i in range(5) :
    x = random.randint(0,100)
    y = random.randint(0,100)
    res = int(input(f"What is {x}-{y} = "))
    if res == x-y:
        c+=1
        print("Your answer is correct!")
    else :
        print("Your answer is wrong.")
        print(f"{x}-{y} should be {x-y}")

t = time.perf_counter() - t
print("Correct counter is : ",c)
print(f"Test time is {t:.2f} seconds")
```

Output..



```
What is 70-22 = 48
Your answer is correct!
What is 69-99 = -30
Your answer is correct!
What is 11-23 = -12
Your answer is correct!
What is 71-24 = 47
Your answer is correct!
What is 57-4 = 53
Your answer is correct!
Correct counter is :  5
Test time is 28.94 seconds

Process finished with exit code 0
```

Result:-successfully executed.

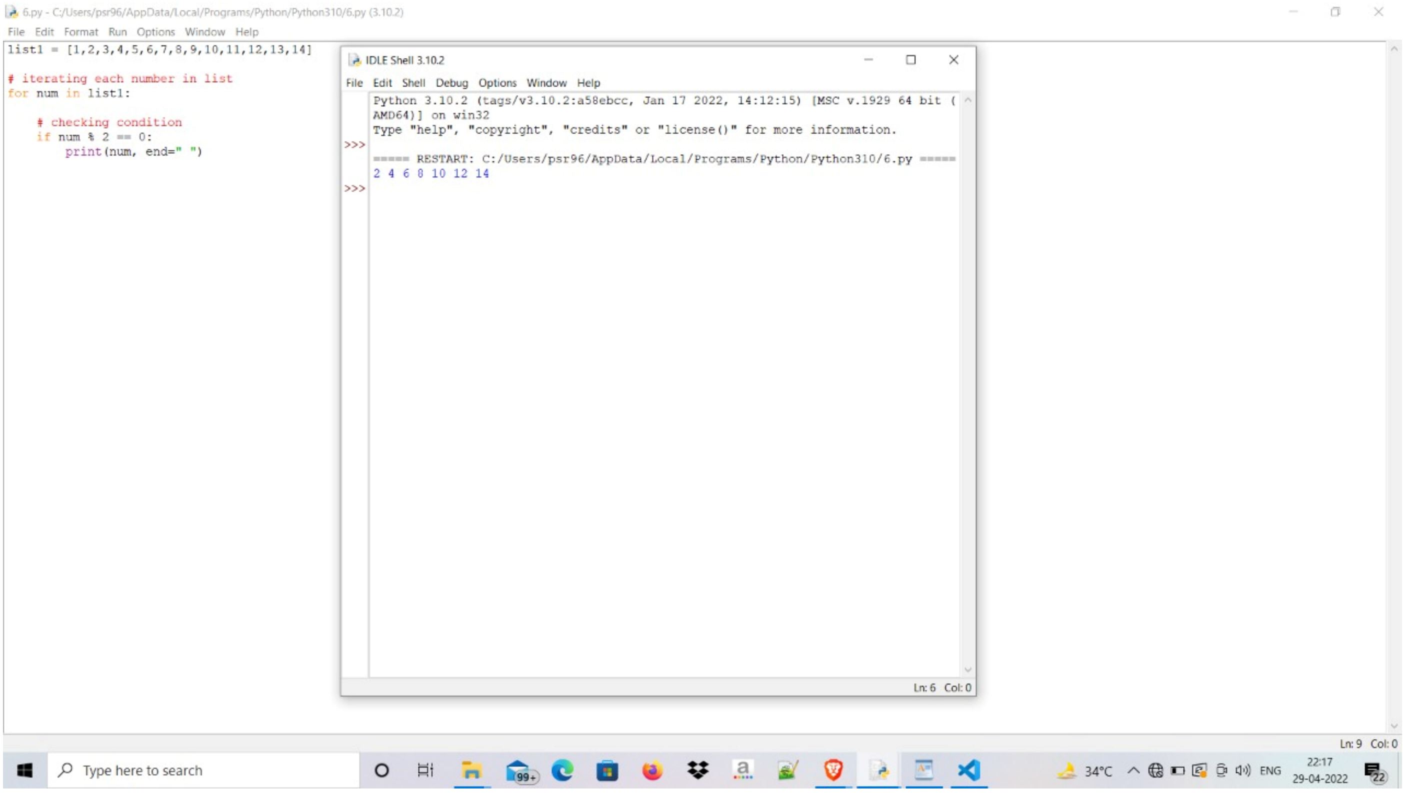
PRACTICAL - 6

Aim :- Write a Python program to formulate a list comprehension that prints even numbers from a range of 1-14.

Program

```
list1 = [1,2,3,4,5,6,7,8,9,10,11,12,13,14]
for num in list1:
    if num%2 ==0:
        print(num,end="")
```

Output



6.py - C:/Users/psr96/AppData/Local/Programs/Python/Python310/6.py (3.10.2)
File Edit Format Run Options Window Help
IDLE Shell 3.10.2
File Edit Shell Debug Options Window Help
Ln: 6 Col: 0
Ln: 9 Col: 0
Type here to search
34°C
ENG
22:17
29-04-2022

```
list1 = [1,2,3,4,5,6,7,8,9,10,11,12,13,14]

# iterating each number in list
for num in list1:

    # checking condition
    if num % 2 == 0:
        print(num, end=" ")
```

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/6.py =====
2 4 6 8 10 12 14
>>>
```

Result:-successfully executed

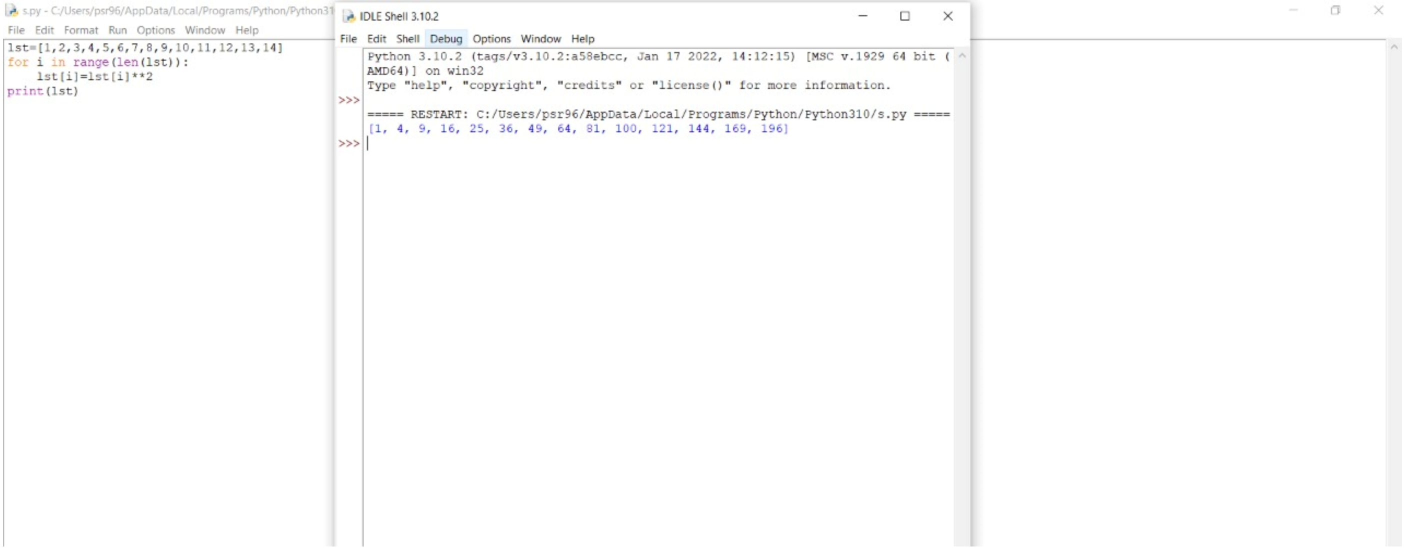
PRACTICAL - 7

Aim :- Write a Python program that formulates a list comprehension to calculate the squares of numbers in a list range of 1-14.

Program

```
lst=[1,2,3,4,5,6,7,8,9,10,11,12,13,14]
for i in range(len(lst)):
   lst[i]=lst[i]**2
print(lst)
```

Output..



s.py - C:/Users/psr96/AppData/Local/Programs/Python/Python31
File Edit Format Run Options Window Help
IDLE Shell 3.10.2
File Edit Shell Debug Options Window Help

```
lst=[1,2,3,4,5,6,7,8,9,10,11,12,13,14]
for i in range(len(lst)):
    lst[i]=lst[i]**2
print(lst)
```

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/s.py =====
[1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196]
>>> |
```

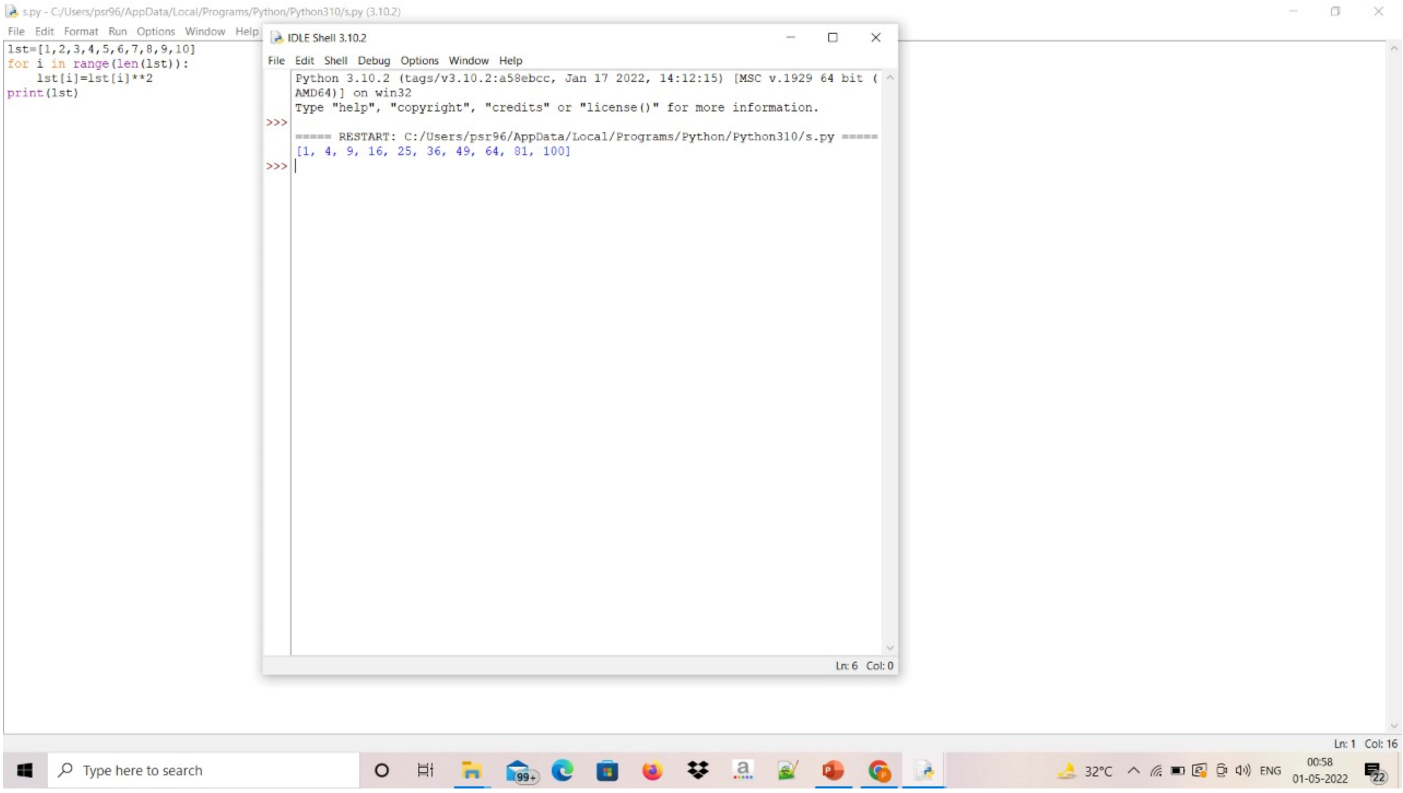
Result:-successfully executed

PRACTICAL - 8

Aim :- Write a Python program to calculate the squares of first 10 Natural Numbers using List comprehension.

```
lst=[1,2,3,4,5,6,7,8,9,10]
for i in range(len(lst)):
    lst[i]=lst[i]**2
print(lst)
```

Output..



s.py - C:/Users/psr96/AppData/Local/Programs/Python/Python310/s.py (3.10.2)
File Edit Format Run Options Window Help
IDLE Shell 3.10.2
File Edit Shell Debug Options Window Help
Ln: 6 Col: 0
Ln: 1 Col: 16
Type here to search
32°C ENG 00:58 01-05-2022

```
lst=[1,2,3,4,5,6,7,8,9,10]
for i in range(len(lst)):
    lst[i]=lst[i]**2
print(lst)
```

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/s.py =====
[1, 4, 9, 16, 25, 36, 49, 64, 81, 100]
>>>
```

Result:-successfully executed

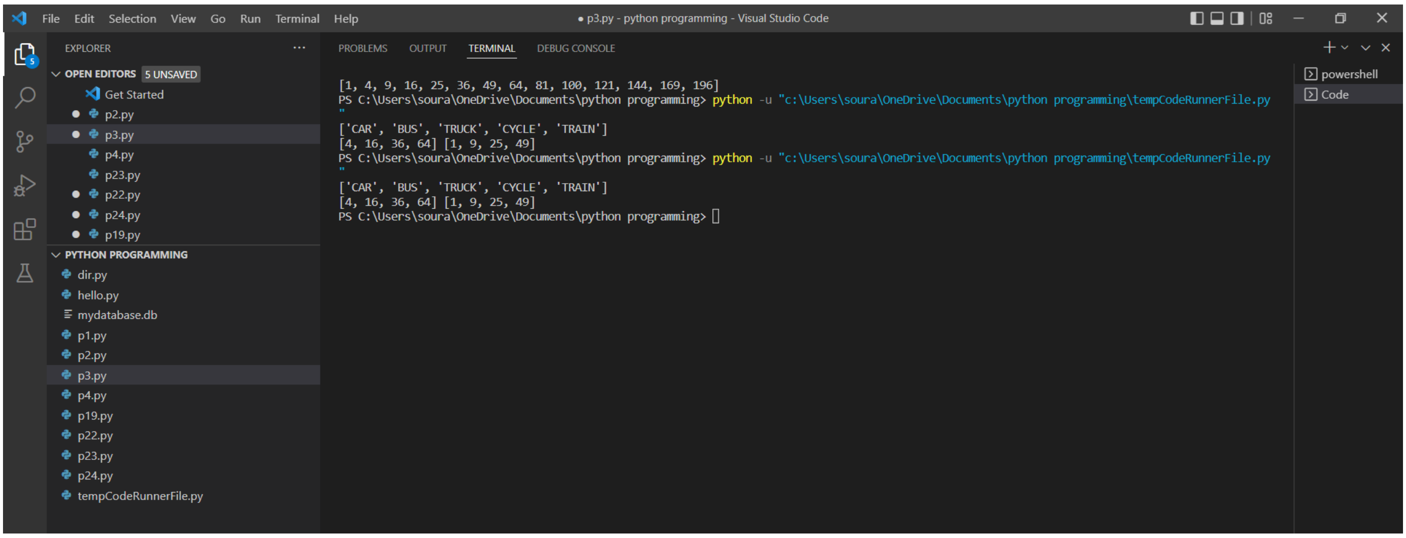
PRACTICAL - 9

Aim :- Consider the following List: vehicle = [‘car&’,’bus’, ‘truck’,‘cycle’, ‘train’;].Write a Python Program that capitalizes the strings that begin with ‘C’.

Program

```
# Python code to convert all string
# from uppercase to lowercase.

# Initialisation
input = ['car', 'bus', 'truck' , 'cycle' , 'train']

# Converting
lst = [x.upper() for x in input]
# printing output
print(lst)
L1=[1,2,3,4,5,6,7,8]

even_sq,odd_sq = [],[]

for i in L1:
    (even_sq if i%2==0 else odd_sq).append(i*i)

print(even_sq,odd_sq)
```

Output…



```
[1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196]
PS C:\Users\soura\OneDrive\Documents\python programming> python -u "c:\Users\soura\OneDrive\Documents\python programming\tempCodeRunnerFile.py
"
['CAR', 'BUS', 'TRUCK', 'CYCLE', 'TRAIN']
[4, 16, 36, 64] [1, 9, 25, 49]
PS C:\Users\soura\OneDrive\Documents\python programming> python -u "c:\Users\soura\OneDrive\Documents\python programming\tempCodeRunnerFile.py
"
['CAR', 'BUS', 'TRUCK', 'CYCLE', 'TRAIN']
[4, 16, 36, 64] [1, 9, 25, 49]
PS C:\Users\soura\OneDrive\Documents\python programming> 
```

Result :- Successfully created.

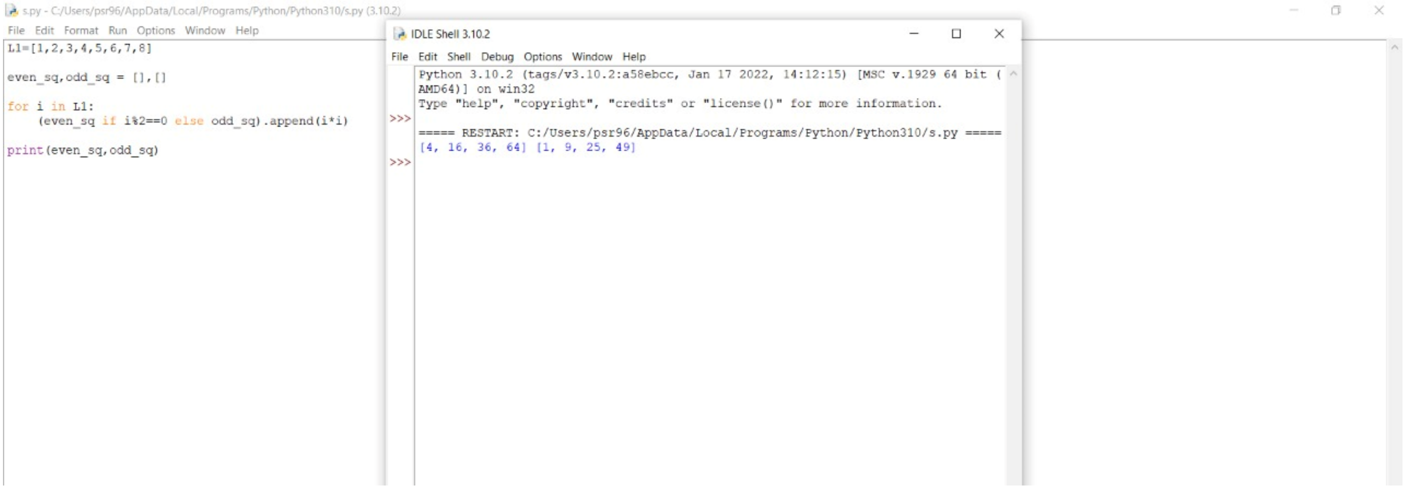
PRACTICAL - 10

Aim :- Consider the following list: l1 = [1, 2, 3, 4, 5, 6, 7, 8, 9]. Write a Python Program to create a list comprehension to find the squares of Even numbers of l1.

Program

```
L1=[1,2,3,4,5,6,7,8]

even_sq,odd_sq = [],[]

for i in L1:
    (even_sq if i%2==0 else odd_sq).append(i*i)

print(even_sq,odd_sq)
```

Output..



s.py - C:/Users/psr96/AppData/Local/Programs/Python/Python310/s.py (3.10.2)
File Edit Format Run Options Window Help
IDLE Shell 3.10.2
File Edit Shell Debug Options Window Help

```
L1=[1,2,3,4,5,6,7,8]

even_sq,odd_sq = [],[]

for i in L1:
    (even_sq if i%2==0 else odd_sq).append(i*i)

print(even_sq,odd_sq)
```

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/s.py =====
[4, 16, 36, 64] [1, 9, 25, 49]
>>>
```

Result:- successfully executed.

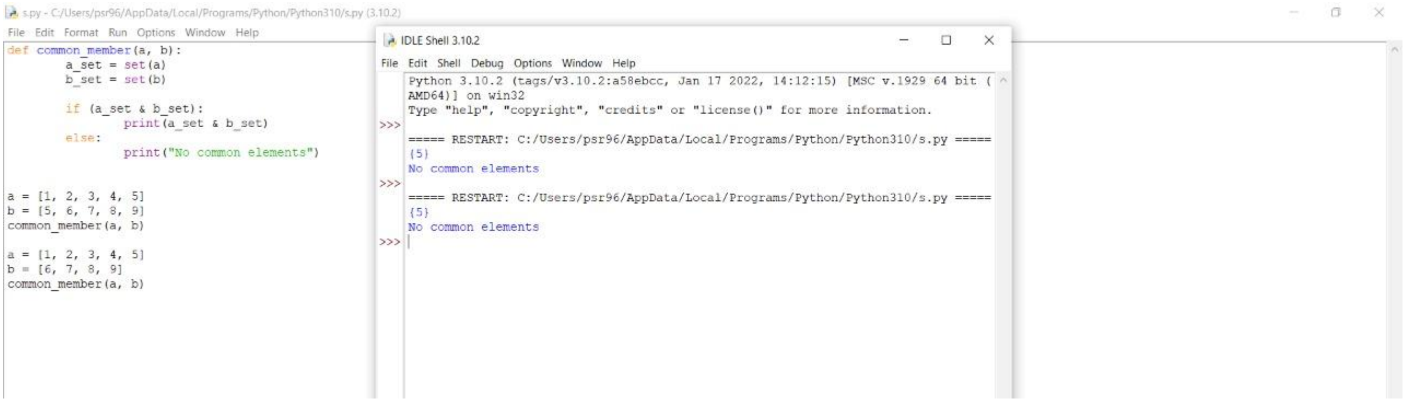
PRACTICAL - 11

Aim :- Write a Python Program to consider two lists with numeric values and make use of List comprehension to create another list that contains the common elements in both lists.

Program

```
# Python program to find the common elements
# in two lists
def common_member(a, b):
        a_set = set(a)
        b_set = set(b)

        if (a_set & b_set):
                print(a_set & b_set)
        else:
                print("No common elements")


a = [1, 2, 3, 4, 5]
b = [5, 6, 7, 8, 9]
common_member(a, b)

a = [1, 2, 3, 4, 5]
b = [6, 7, 8, 9]
common_member(a, b)
```

Output..



s.py - C:/Users/psr96/AppData/Local/Programs/Python/Python310/s.py (3.10.2)
File Edit Format Run Options Window Help
IDLE Shell 3.10.2
File Edit Shell Debug Options Window Help

```
def common_member(a, b):
        a_set = set(a)
        b_set = set(b)

        if (a_set & b_set):
                print(a_set & b_set)
        else:
                print("No common elements")


a = [1, 2, 3, 4, 5]
b = [5, 6, 7, 8, 9]
common_member(a, b)

a = [1, 2, 3, 4, 5]
b = [6, 7, 8, 9]
common_member(a, b)
```

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/s.py =====
{5}
No common elements
>>>
===== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/s.py =====
{5}
No common elements
>>>
```

Result:- successfully executed

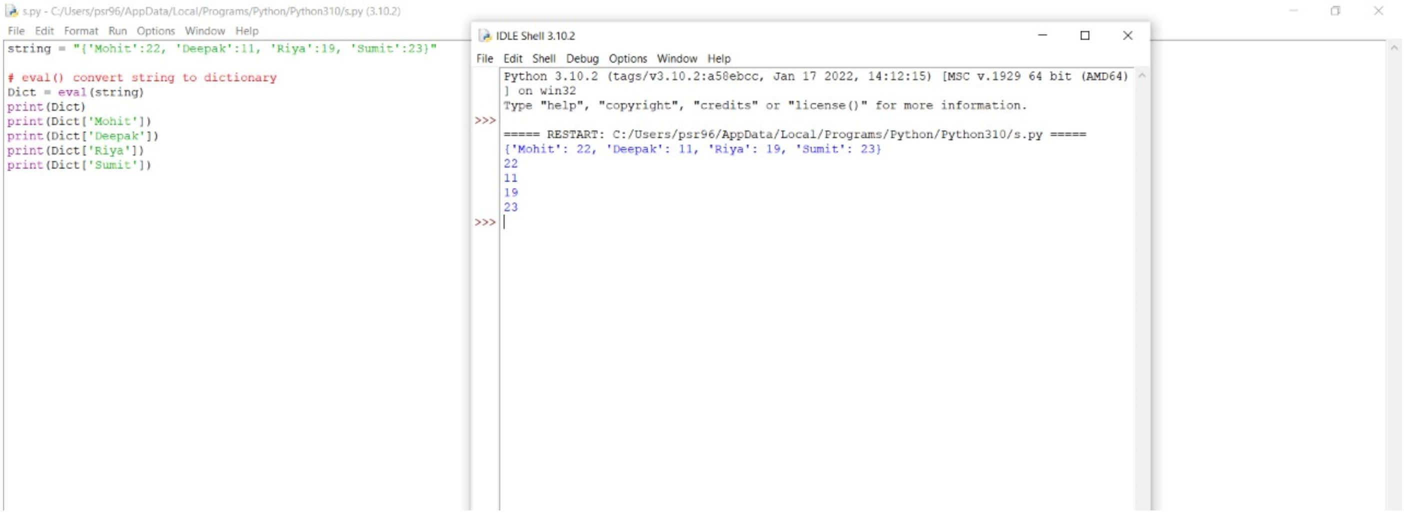
PRACTICAL - 12

Aim :- Consider the following string: str =”Mohit=22,Deepak=11,Riya=19,Sumit=23”. Write a Python Program to convert the following string into Dictionary with distinct Name &amp; Age key pairs.

Program

```
# Python3 code to convert
# a string to a dictionary

# Initializing String
string = "{'Mohit':22, 'Deepak':11, 'Riya':19, 'Sumit':23}"

# eval() convert string to dictionary
Dict = eval(string)
print(Dict)
print(Dict['Mohit'])
print(Dict['Deepak'])
print(Dict['Riya'])
print(Dict['Sumit'])
```

Output..



s.py - C:/Users/psr96/AppData/Local/Programs/Python/Python310/s.py (3.10.2)
File Edit Format Run Options Window Help
IDLE Shell 3.10.2
File Edit Shell Debug Options Window Help

```
string = "{'Mohit':22, 'Deepak':11, 'Riya':19, 'Sumit':23}"

# eval() convert string to dictionary
Dict = eval(string)
print(Dict)
print(Dict['Mohit'])
print(Dict['Deepak'])
print(Dict['Riya'])
print(Dict['Sumit'])
```

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (AMD64)
] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/s.py =====
{'Mohit': 22, 'Deepak': 11, 'Riya': 19, 'Sumit': 23}
22
11
19
23
>>>
```

Result:- successfully executed,

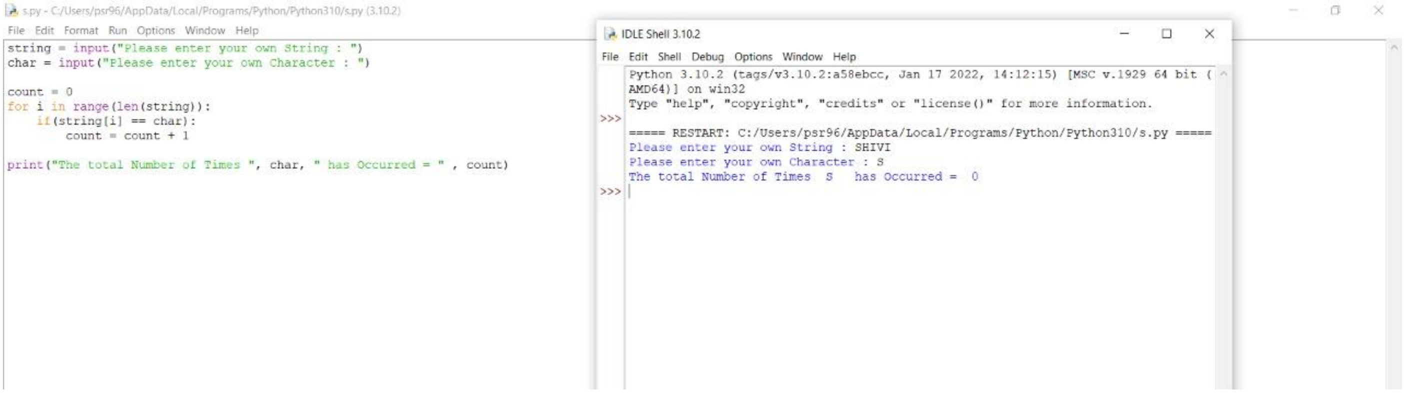
PRACTICAL - 13

Aim: - Write a Python Program to count the number of occurrences of each letter in a string taken from user input.

Program

```
# Python Program to Count Occurrence of a Character in a String

string = input("Please enter your own String : ")

char = input("Please enter your own Character : ")

count = 0

for i in range(len(string)):

    if(string[i] == char):

        count = count + 1

print("The total Number of Times ", char, " has Occurred = " , count)
```

Output..



s.py - C:/Users/psr96/AppData/Local/Programs/Python/Python310/s.py (3.10.2)
File Edit Format Run Options Window Help

```
string = input("Please enter your own String : ")
char = input("Please enter your own Character : ")

count = 0
for i in range(len(string)):
    if(string[i] == char):
        count = count + 1

print("The total Number of Times ", char, " has Occurred = " , count)
```

IDLE Shell 3.10.2
File Edit Shell Debug Options Window Help

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/s.py =====
Please enter your own String : SHIVI
Please enter your own Character : S
The total Number of Times  S   has Occurred =  0
>>>
```

Result:- successfully execute

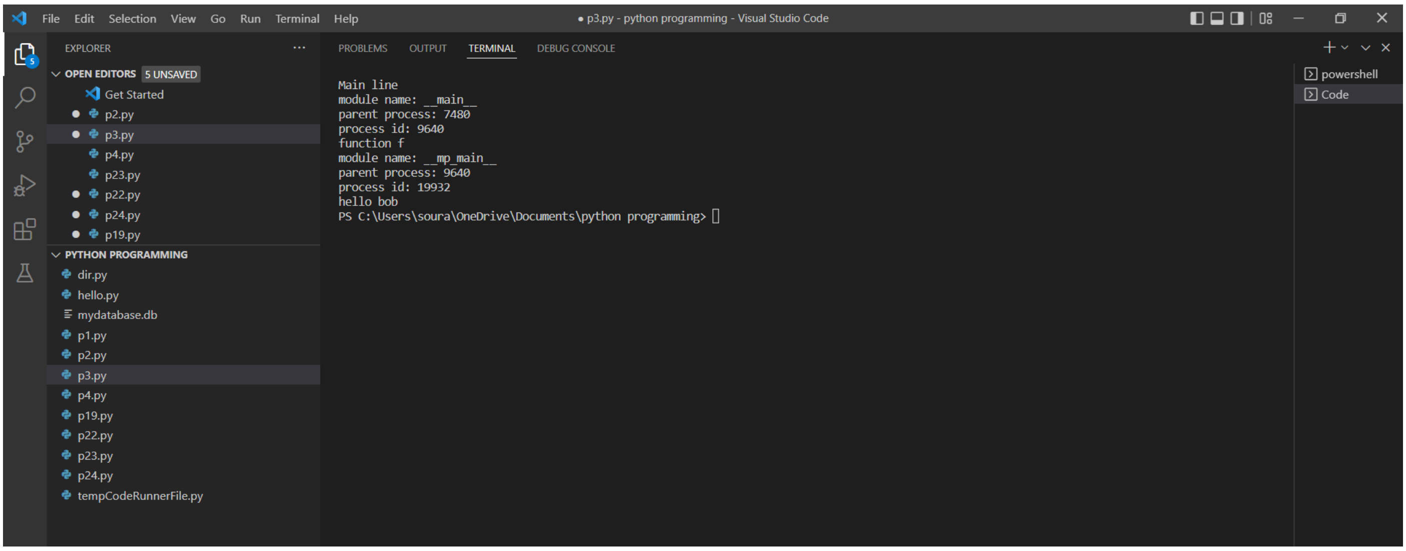
PRACTICAL - 14

Aim :- Write a Python Program to print Process IDs of a Python Process. If the process is a Parent Process, print Parent Process ID; if it is a Child Process, print both Parent &amp; Child Process IDs.

Program

```
from multiprocessing import Process
import os
def info(title):
    print(title)
    print('module name:', __name__)
    print('parent process:', os.getppid())
    print('process id:', os.getpid())
def f(name):
    info('function f')
    print('hello', name)
if __name__ == '__main__':
    info('Main line')
    p = Process(target=f, args=('bob',))
    p.start()
    p.join()
```

Output..



```
Main line
module name: __main__
parent process: 7480
process id: 9640
function f
module name: __mp_main__
parent process: 9640
process id: 19932
hello bob
PS C:\Users\soura\OneDrive\Documents\python programming> 
```

Result :- Successfully execute.

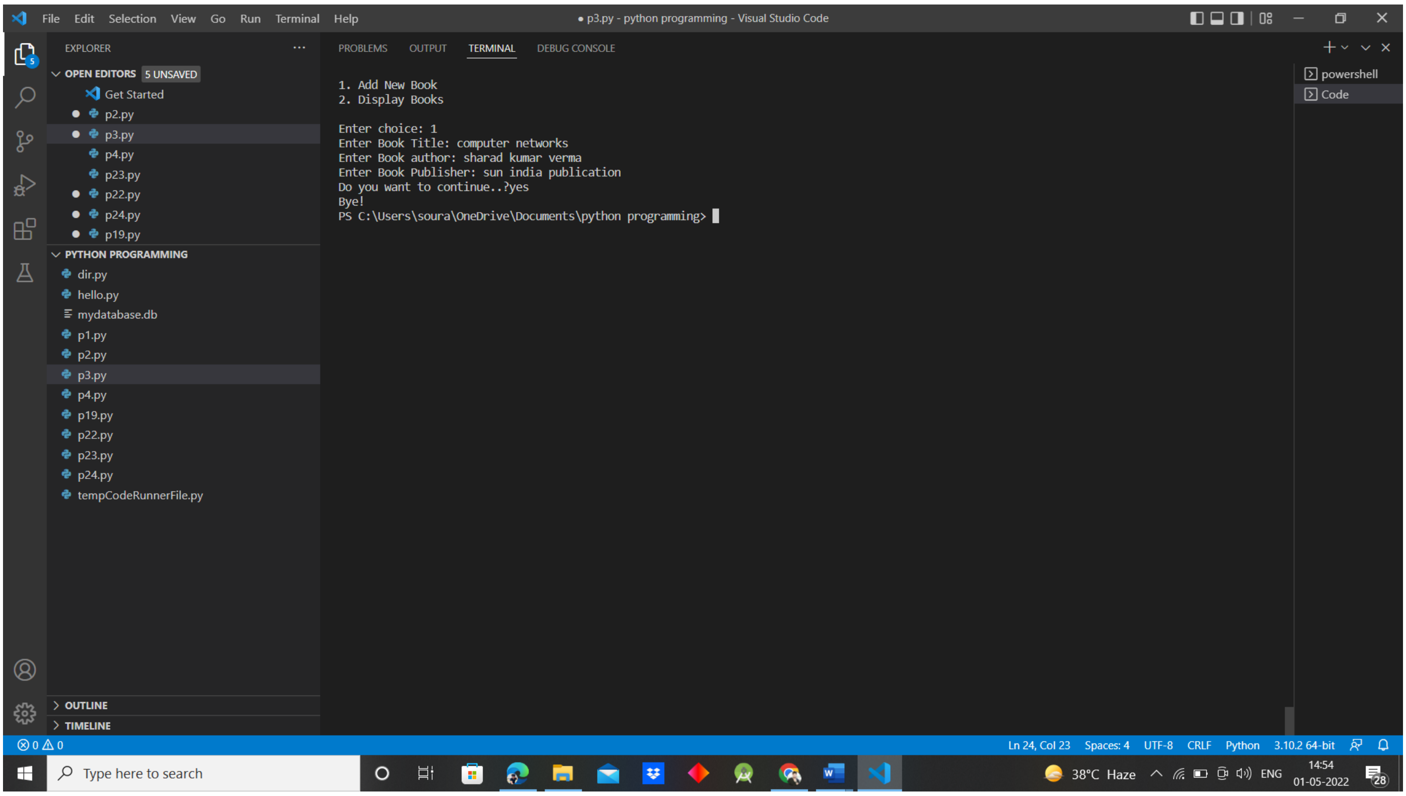
PRACTICAL - 15

Aim :- Write a Menu-driven program that keeps record of books & journals available in a library. Create a class Book with a Constructor to initialize title, author &amp; price. Create two member functions read() &amp; display() in the same class. Your menu must display two choice: 1- add new book; 2- display book.

Program

```
class library:
    def _init_(self):
        self.title=""
        self.author=""
        self.publisher=""
    def read(self):
        self.title=input("Enter Book Title: ")
        self.author=input("Enter Book author: ")
        self.publisher=input("Enter Book Publisher: ")
    def display(self):
        print("Title:", self.title)
        print("Author:", self.author)
        print("Publisher:", self.publisher)
        print("\n")
my_book=[]
ch='y'
while(ch=='y'):
    print('''
1. Add New Book
2. Display Books
''')
    choice=int(input("Enter choice: "))
    if(choice==1):
        book=library()
        book.read()
        my_book.append(book)
    elif(choice==2):
        for i in my_book:
            i.display()
    else:
        print("Invalid choice!")
    ch=input("Do you want to continue..?")
print("Bye!")
```

Output..



```
1. Add New Book
2. Display Books

Enter choice: 1
Enter Book Title: computer networks
Enter Book author: sharad kumar verma
Enter Book Publisher: sun india publication
Do you want to continue..?yes
Bye!
PS C:\Users\soura\OneDrive\Documents\python programming> 
```

Result :- successfully executed

Practical – 16

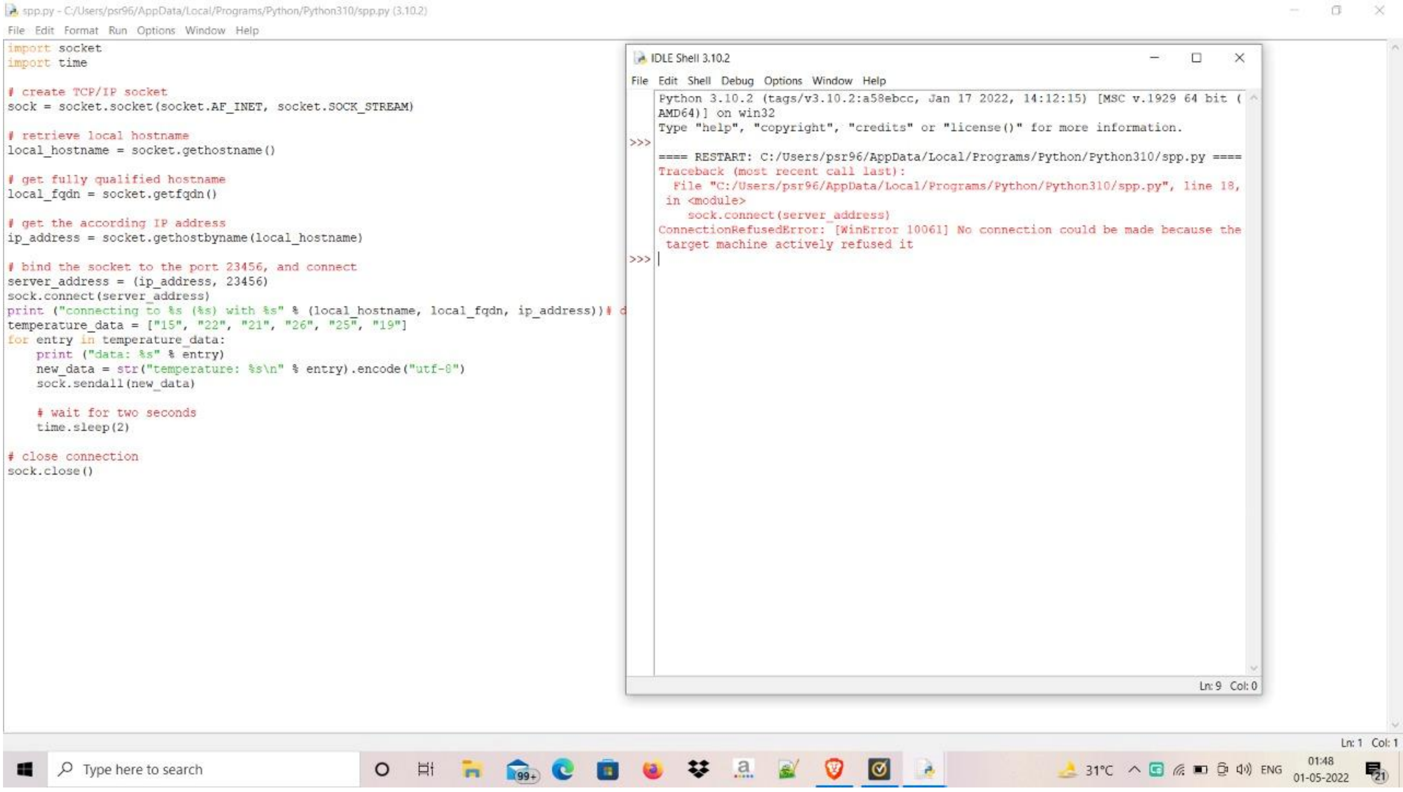
Aim :- Write a socket program to create communication between client & server.

Program

```
Server.py
import socket
import time

# create TCP/IP socket
sock = socket.socket(socket.AF_INET, socket.SOCK_STREAM)

# retrieve local hostname
local_hostname = socket.gethostname()

# get fully qualified hostname
local_fqdn = socket.getfqdn()

# get the according IP address
ip_address = socket.gethostbyname(local_hostname)

# bind the socket to the port 23456, and connect
server_address = (ip_address, 23456)
sock.connect(server_address)
print ("connecting to %s (%s) with %s" % (local_hostname, local_fqdn, ip_address))# define example data
to be sent to the server
temperature_data = ["15", "22", "21", "26", "25", "19"]
for entry in temperature_data:
    print ("data: %s" % entry)
    new_data = str("temperature: %s\n" % entry).encode("utf-8")
    sock.sendall(new_data)

    # wait for two seconds
    time.sleep(2)

# close connection
sock.close()

client.py
import socket

# create TCP/IP socket
sock = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
```

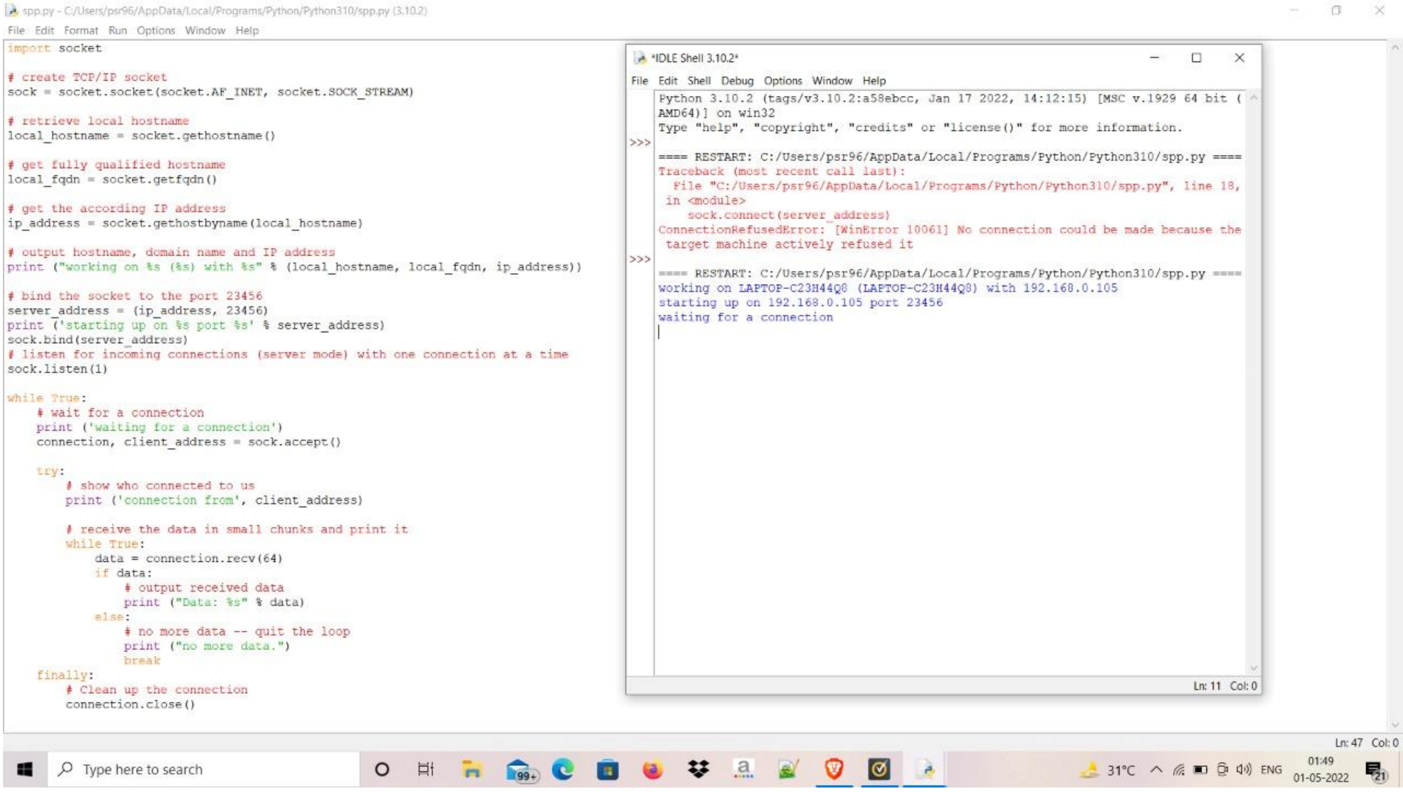
```
# retrieve local hostname
local_hostname = socket.gethostname()

# get fully qualified hostname
local_fqdn = socket.getfqdn()

# get the according IP address
ip_address = socket.gethostbyname(local_hostname)

# output hostname, domain name and IP address
print ("working on %s (%s) with %s" % (local_hostname, local_fqdn, ip_address))

# bind the socket to the port 23456
server_address = (ip_address, 23456)
print ('starting up on %s port %s' % server_address)
sock.bind(server_address)
# listen for incoming connections (server mode) with one connection at a time
sock.listen(1)

while True:
    # wait for a connection
    print ('waiting for a connection')
    connection, client_address = sock.accept()

    try:
        # show who connected to us
        print ('connection from', client_address)

        # receive the data in small chunks and print it
        while True:
            data = connection.recv(64)
            if data:
                # output received data
                print ("Data: %s" % data)
            else:
                # no more data -- quit the loop
                print ("no more data.")
                break
    finally:
        # Clean up the connection
        connection.close()
```

Output..


spp.py - C:/Users/psr96/AppData/Local/Programs/Python/Python310/spp.py (3.10.2)
File Edit Format Run Options Window Help
IDLE Shell 3.10.2
File Edit Shell Debug Options Window Help
Ln: 9 Col: 0
Ln: 1 Col: 1
Type here to search
31°C
ENG
01:48
01-05-2022

```
import socket
import time

# create TCP/IP socket
sock = socket.socket(socket.AF_INET, socket.SOCK_STREAM)

# retrieve local hostname
local_hostname = socket.gethostname()

# get fully qualified hostname
local_fqdn = socket.getfqdn()

# get the according IP address
ip_address = socket.gethostbyname(local_hostname)

# bind the socket to the port 23456, and connect
server_address = (ip_address, 23456)
sock.connect(server_address)
print ("connecting to %s (%s) with %s" % (local_hostname, local_fqdn, ip_address))# d
temperature_data = ["15", "22", "21", "26", "25", "19"]
for entry in temperature_data:
    print ("data: %s" % entry)
    new_data = str("temperature: %s\n" % entry).encode("utf-8")
    sock.sendall(new_data)

    # wait for two seconds
    time.sleep(2)

# close connection
sock.close()
```

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/spp.py ====
Traceback (most recent call last):
  File "C:/Users/psr96/AppData/Local/Programs/Python/Python310/spp.py", line 18,
 in <module>
    sock.connect(server_address)
ConnectionRefusedError: [WinError 10061] No connection could be made because the
 target machine actively refused it
>>> 
```


spp.py - C:/Users/psr96/AppData/Local/Programs/Python/Python310/spp.py (3.10.2)
File Edit Format Run Options Window Help
IDLE Shell 3.10.2
File Edit Shell Debug Options Window Help
Ln: 11 Col: 0
Ln: 47 Col: 0
Type here to search
31°C
ENG
01:49
01-05-2022

```
import socket

# create TCP/IP socket
sock = socket.socket(socket.AF_INET, socket.SOCK_STREAM)

# retrieve local hostname
local_hostname = socket.gethostname()

# get fully qualified hostname
local_fqdn = socket.getfqdn()

# get the according IP address
ip_address = socket.gethostbyname(local_hostname)

# output hostname, domain name and IP address
print ("working on %s (%s) with %s" % (local_hostname, local_fqdn, ip_address))

# bind the socket to the port 23456
server_address = (ip_address, 23456)
print ('starting up on %s port %s' % server_address)
sock.bind(server_address)
# listen for incoming connections (server mode) with one connection at a time
sock.listen(1)

while True:
    # wait for a connection
    print ('waiting for a connection')
    connection, client_address = sock.accept()

    try:
        # show who connected to us
        print ('connection from', client_address)

        # receive the data in small chunks and print it
        while True:
            data = connection.recv(64)
            if data:
                # output received data
                print ("Data: %s" % data)
            else:
                # no more data -- quit the loop
                print ("no more data.")
                break
    finally:
        # Clean up the connection
        connection.close()
```

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/spp.py ====
Traceback (most recent call last):
  File "C:/Users/psr96/AppData/Local/Programs/Python/Python310/spp.py", line 18,
 in <module>
    sock.connect(server_address)
ConnectionRefusedError: [WinError 10061] No connection could be made because the
 target machine actively refused it
>>>
==== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/spp.py ====
working on LAPTOP-C23H44Q8 (LAPTOP-C23H44Q8) with 192.168.0.105
starting up on 192.168.0.105 port 23456
waiting for a connection
```

Result:- successfully executed

PROGRAM - 17

Aim :- Write a socket program to create communication between client & server & receive message from both end.

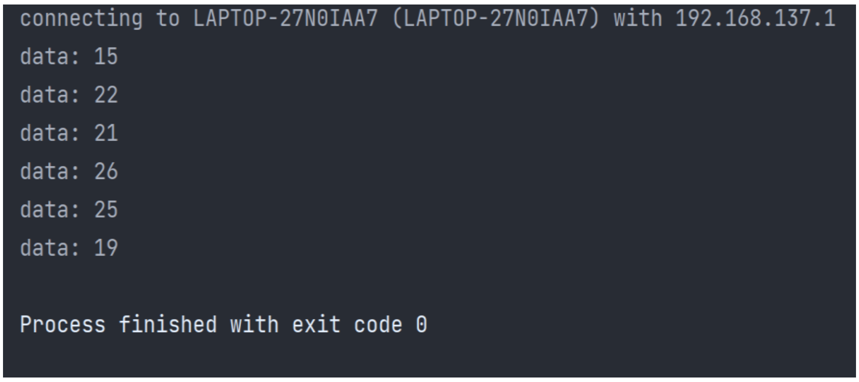
Program

```
import socket
import time

# create TCP/IP socket
sock = socket.socket(socket.AF_INET, socket.SOCK_STREAM)

# retrieve local hostname
local_hostname = socket.gethostname()

# get fully qualified hostname
local_fqdn = socket.getfqdn()

# get the according IP address
ip_address = socket.gethostbyname(local_hostname)

# bind the socket to the port 23456, and connect
server_address = (ip_address, 23456)
sock.connect(server_address)
print ("connecting to %s (%s) with %s" % (local_hostname, local_fqdn, ip_address))

# define example data to be sent to the server
temperature_data = ["15", "22", "21", "26", "25", "19"]
for entry in temperature_data:
    print ("data: %s" % entry)
    new_data = str("temperature: %s\n" % entry).encode("utf-8")
    sock.sendall(new_data)

    # wait for two seconds
    time.sleep(2)

# close connection
sock.close()
```

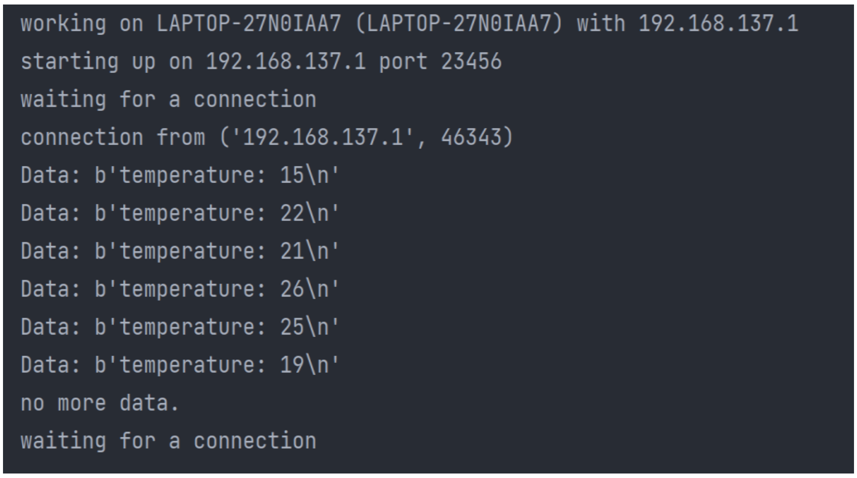
Server.py

```
import socket

# create TCP/IP socket
sock = socket.socket(socket.AF_INET, socket.SOCK_STREAM)

# retrieve local hostname
local_hostname = socket.gethostname()

# get fully qualified hostname
local_fqdn = socket.getfqdn()

# get the according IP address
ip_address = socket.gethostbyname(local_hostname)

# output hostname, domain name and IP address
print ("working on %s (%s) with %s" % (local_hostname, local_fqdn, ip_address))

# bind the socket to the port 23456
server_address = (ip_address, 23456)
print ('starting up on %s port %s' % server_address)
sock.bind(server_address)

# listen for incoming connections (server mode) with one connection at a time
sock.listen(1)

while True:
    # wait for a connection
    print ('waiting for a connection')
    connection, client_address = sock.accept()

    try:
        # show who connected to us
        print ('connection from', client_address)

        # receive the data in small chunks and print it
        while True:
            data = connection.recv(64)
            if data:
                # output received data
                print ("Data: %s" % data)
            else:
                # no more data -- quit the loop
                print ("no more data.")
                break
    finally:
```

Output..



```
connecting to LAPTOP-27N0IAA7 (LAPTOP-27N0IAA7) with 192.168.137.1
data: 15
data: 22
data: 21
data: 26
data: 25
data: 19

Process finished with exit code 0
```



```
working on LAPTOP-27N0IAA7 (LAPTOP-27N0IAA7) with 192.168.137.1
starting up on 192.168.137.1 port 23456
waiting for a connection
connection from ('192.168.137.1', 46343)
Data: b'temperature: 15\n'
Data: b'temperature: 22\n'
Data: b'temperature: 21\n'
Data: b'temperature: 26\n'
Data: b'temperature: 25\n'
Data: b'temperature: 19\n'
no more data.
waiting for a connection
```

Result :- Successfully executed.

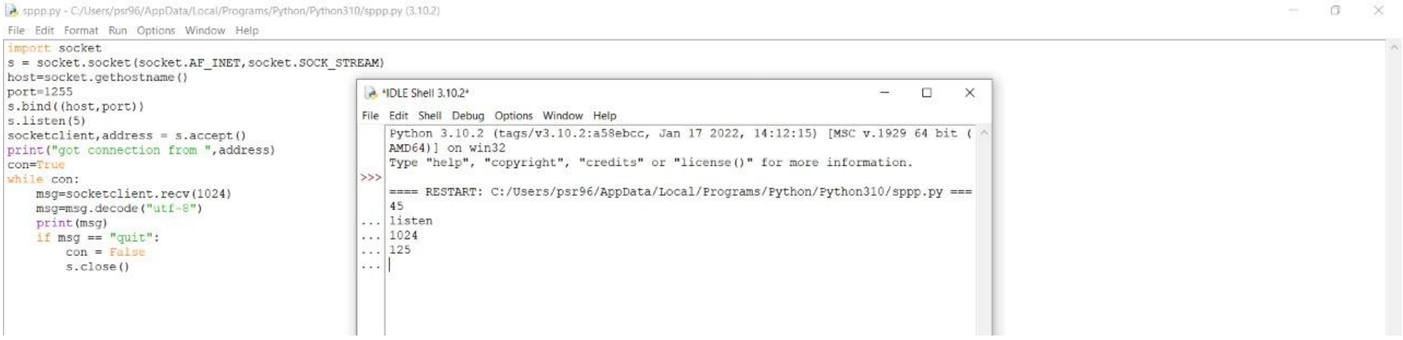
PROGRAM - 18

Aim :- Write a program to create communication between client & server &amp; receive the messages from the server till the connection is terminated.

Program

```
Server.py
import socket
s = socket.socket(socket.AF_INET,socket.SOCK_STREAM)
host=socket.gethostname()
port=1255
s.bind((host,port))
s.listen(5)
socketclient,address = s.accept()
print("got connection from ",address)
con=True
while con:
    msg=socketclient.recv(1024)
    msg=msg.decode("utf-8")
    print(msg)
    if msg == "quit":
        con = False
        s.close()

client.py
import socket
s = socket.socket(socket.AF_INET,socket.SOCK_STREAM)
host=socket.gethostname()
port=1255
s.connect((host,port))
con=True
while con:
    msg=input("enter msg :")
    #s.send(bytes(msg))
    s.send(msg.encode("utf-8"))
    if msg == "quit":
        con = False
        s.close()
```

Output..



sppp.py - C:/Users/psr96/AppData/Local/Programs/Python/Python310/sppp.py (3.10.2)
File Edit Format Run Options Window Help

```
import socket
s = socket.socket(socket.AF_INET,socket.SOCK_STREAM)
host=socket.gethostname()
port=1255
s.bind((host,port))
s.listen(5)
socketclient,address = s.accept()
print("got connection from ",address)
con=True
while con:
    msg=socketclient.recv(1024)
    msg=msg.decode("utf-8")
    print(msg)
    if msg == "quit":
        con = False
        s.close()
```

IDLE Shell 3.10.2
File Edit Shell Debug Options Window Help

```
    Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (
    AMD64)] on win32
    Type "help", "copyright", "credits" or "license()" for more information.
>>>
    ==== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/sppp.py ===
    45
... listen
... 1024
... 125
...
```

Result:- Successfully executed.

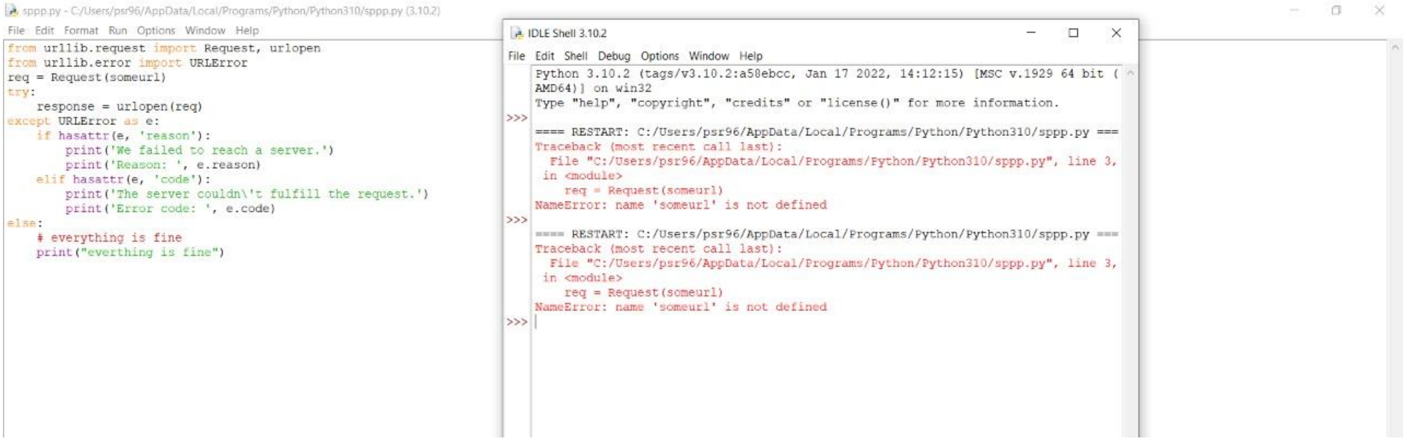
PROGRAM - 19

Aim :- Write a program to read a URL. Parse the URL and handle the error in fetching the URL.

Program

```
from urllib.request import Request, urlopen
from urllib.error import URLError
req = Request(someurl)
try:
    response = urlopen(req)
except URLError as e:
    if hasattr(e, 'reason'):
        print('We failed to reach a server.')
        print('Reason: ', e.reason)
    elif hasattr(e, 'code'):
        print('The server couldn\'t fulfill the request.')
        print('Error code: ', e.code)
else:
    # everything is fine
```

Output..


sppp.py - C:/Users/psr96/AppData/Local/Programs/Python/Python310/sppp.py (3.10.2)
File Edit Format Run Options Window Help
IDLE Shell 3.10.2
File Edit Shell Debug Options Window Help

```
from urllib.request import Request, urlopen
from urllib.error import URLError
req = Request(someurl)
try:
    response = urlopen(req)
except URLError as e:
    if hasattr(e, 'reason'):
        print('We failed to reach a server.')
        print('Reason: ', e.reason)
    elif hasattr(e, 'code'):
        print('The server couldn\'t fulfill the request.')
        print('Error code: ', e.code)
else:
    # everything is fine
    print("everthing is fine")
```

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/sppp.py ===
Traceback (most recent call last):
  File "C:/Users/psr96/AppData/Local/Programs/Python/Python310/sppp.py", line 3,
 in <module>
    req = Request(someurl)
NameError: name 'someurl' is not defined
>>>
==== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/sppp.py ===
Traceback (most recent call last):
  File "C:/Users/psr96/AppData/Local/Programs/Python/Python310/sppp.py", line 3,
 in <module>
    req = Request(someurl)
NameError: name 'someurl' is not defined
>>>
```

Result:- Successfully Execute

PROGRAM - 20

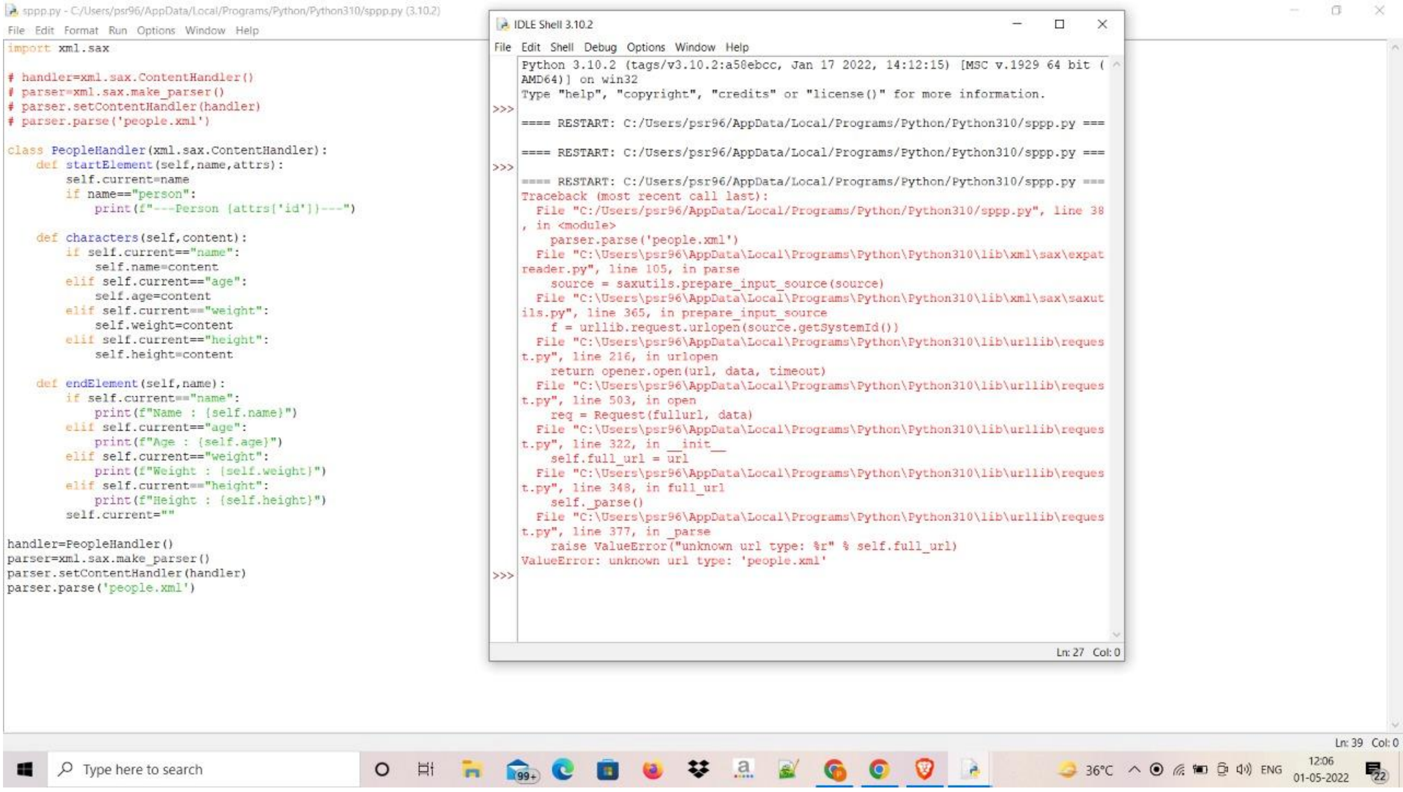
Aim :- Create a XML file and parse XML with SAX (Simple API for XML).

Program

```
#!/usr/bin/python
import xml.sax
class MovieHandler( xml.sax.ContentHandler ):
   def __init__(self):
      self.CurrentData = ""
      self.type = ""
      self.format = ""
      self.year = ""
      self.rating = ""
      self.stars = ""
      self.description = ""
# Call when an element starts
def startElement(self, tag, attributes):
   self.CurrentData = tag
      if tag == "movie":
         print "*****Movie*****"
         title = attributes["title"]
         print "Title:", title

# Call when an elements ends
def endElement(self, tag):
if self.CurrentData == "type":
print "Type:", self.type
   elif self.CurrentData == "format":
print "Format:", self.format
   elif self.CurrentData == "year":
print "Year:", self.year
   elif self.CurrentData == "rating":
   print "Rating:", self.rating
elif self.CurrentData == "stars":
   print "Stars:", self.stars
elif self.CurrentData == "description":
   print "Description:", self.description
self.CurrentData = ""

   # Call when a character is read
   def characters(self, content):
      if self.CurrentData == "type":
         self.type = content
      elif self.CurrentData == "format":
         self.format = content
         elif self.CurrentData == "year":
         self.year = content
```

```
        elif self.CurrentData == "rating":
        self.rating = content
      elif self.CurrentData == "stars":
        self.stars = content
      elif self.CurrentData == "description":
        self.description = content

if ( __name__ == "__main__"):

  # create an XMLReader
  parser = xml.sax.make_parser()
  # turn off namepsaces
  parser.setFeature(xml.sax.handler.feature_namespaces, 0)
  # override the default ContextHandler
Handler = MovieHandler()
parser.setContentHandler( Handler )
parser.parse("movies.xml")
```

Output..


sppp.py - C:/Users/psr96/AppData/Local/Programs/Python/Python310/sppp.py (3.10.2)
File Edit Format Run Options Window Help
IDLE Shell 3.10.2
File Edit Shell Debug Options Window Help
Ln: 27 Col: 0
Ln: 39 Col: 0
Type here to search
36°C
ENG
12:06
01-05-2022

```
import xml.sax

# handler=xml.sax.ContentHandler()
# parser=xml.sax.make_parser()
# parser.setContentHandler(handler)
# parser.parse('people.xml')

class PeopleHandler(xml.sax.ContentHandler):
    def startElement(self,name,attrs):
        self.current=name
        if name=="person":
            print(f"---Person {attrs['id']}---")

    def characters(self,content):
        if self.current=="name":
            self.name=content
        elif self.current=="age":
            self.age=content
        elif self.current=="weight":
            self.weight=content
        elif self.current=="height":
            self.height=content

    def endElement(self,name):
        if self.current=="name":
            print(f"Name : {self.name}")
        elif self.current=="age":
            print(f"Age : {self.age}")
        elif self.current=="weight":
            print(f"Weight : {self.weight}")
        elif self.current=="height":
            print(f"Height : {self.height}")
        self.current=""

handler=PeopleHandler()
parser=xml.sax.make_parser()
parser.setContentHandler(handler)
parser.parse('people.xml')
```

```
Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
==== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/sppp.py ===

==== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/sppp.py ===
>>>
==== RESTART: C:/Users/psr96/AppData/Local/Programs/Python/Python310/sppp.py ===
Traceback (most recent call last):
  File "C:/Users/psr96/AppData/Local/Programs/Python/Python310/sppp.py", line 38
, in <module>
    parser.parse('people.xml')
  File "C:\Users\psr96\AppData\Local\Programs\Python\Python310\lib\xml\sax\expat
reader.py", line 105, in parse
    source = saxutils.prepare_input_source(source)
  File "C:\Users\psr96\AppData\Local\Programs\Python\Python310\lib\xml\sax\saxut
ils.py", line 365, in prepare_input_source
    f = urllib.request.urlopen(source.getSystemId())
  File "C:\Users\psr96\AppData\Local\Programs\Python\Python310\lib\urllib\reques
t.py", line 216, in urlopen
    return opener.open(url, data, timeout)
  File "C:\Users\psr96\AppData\Local\Programs\Python\Python310\lib\urllib\reques
t.py", line 503, in open
    req = Request(fullurl, data)
  File "C:\Users\psr96\AppData\Local\Programs\Python\Python310\lib\urllib\reques
t.py", line 322, in __init__
    self.full_url = url
  File "C:\Users\psr96\AppData\Local\Programs\Python\Python310\lib\urllib\reques
t.py", line 348, in full_url
    self._parse()
  File "C:\Users\psr96\AppData\Local\Programs\Python\Python310\lib\urllib\reques
t.py", line 377, in _parse
    raise ValueError("unknown url type: %r" % self.full_url)
ValueError: unknown url type: 'people.xml'
>>>
```

Result:- Successfully Execute

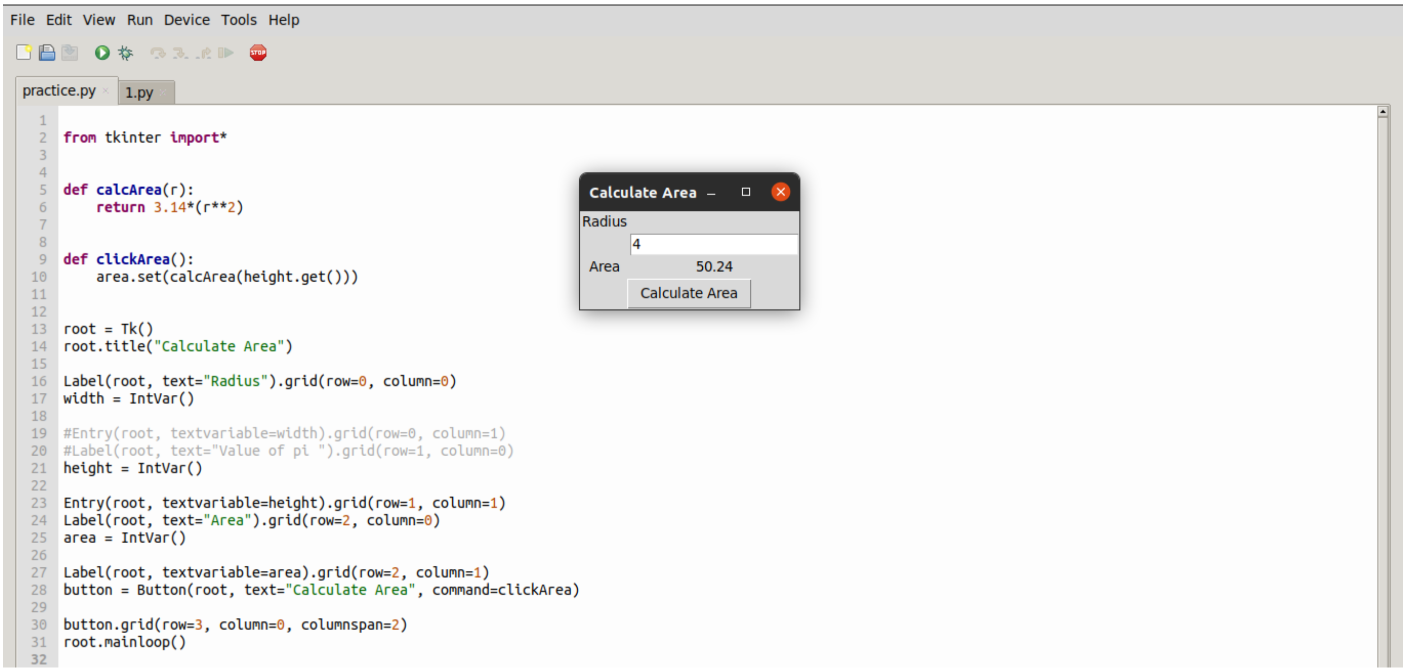
PROGRAM – 21

Aim :- Write a GUI program to calculate the area of a circle and display both in a text box.

Program

```
from tkinter import*


def calcArea(r):
    return 3.14*(r**2)


def clickArea():
    area.set(calcArea(height.get()))


root = Tk()
root.title("Calculate Area")

Label(root, text="Radius").grid(row=0, column=0)
width = IntVar()

#Entry(root, textvariable=width).grid(row=0, column=1)
#Label(root, text="Value of pi ").grid(row=1, column=0)
height = IntVar()

Entry(root, textvariable=height).grid(row=1, column=1)
Label(root, text="Area").grid(row=2, column=0)
area = IntVar()

Label(root, textvariable=area).grid(row=2, column=1)
button = Button(root, text="Calculate Area", command=clickArea)

button.grid(row=3, column=0, columnspan=2)
root.mainloop()
```

Output..



```python

from tkinter import*


def calcArea(r):
    return 3.14*(r**2)


def clickArea():
    area.set(calcArea(height.get()))


root = Tk()
root.title("Calculate Area")

Label(root, text="Radius").grid(row=0, column=0)
width = IntVar()

#Entry(root, textvariable=width).grid(row=0, column=1)
#Label(root, text="Value of pi ").grid(row=1, column=0)
height = IntVar()

Entry(root, textvariable=height).grid(row=1, column=1)
Label(root, text="Area").grid(row=2, column=0)
area = IntVar()

Label(root, textvariable=area).grid(row=2, column=1)
button = Button(root, text="Calculate Area", command=clickArea)

button.grid(row=3, column=0, columnspan=2)
root.mainloop()

```

```
Calculate Area
Radius
        4
Area         50.24
     Calculate Area
```

Result:- successfully executed

PROGRAM – 22

Aim :- Write a python SQLite program to create a student table with the following fields: Registration_no, Name, Phone_no, Branch, Year Perform the following operations:
a. Insert 5 records in table.
b. Display First Record only
c. Display all Records
d. Update any Record
e. Delete any one Record.

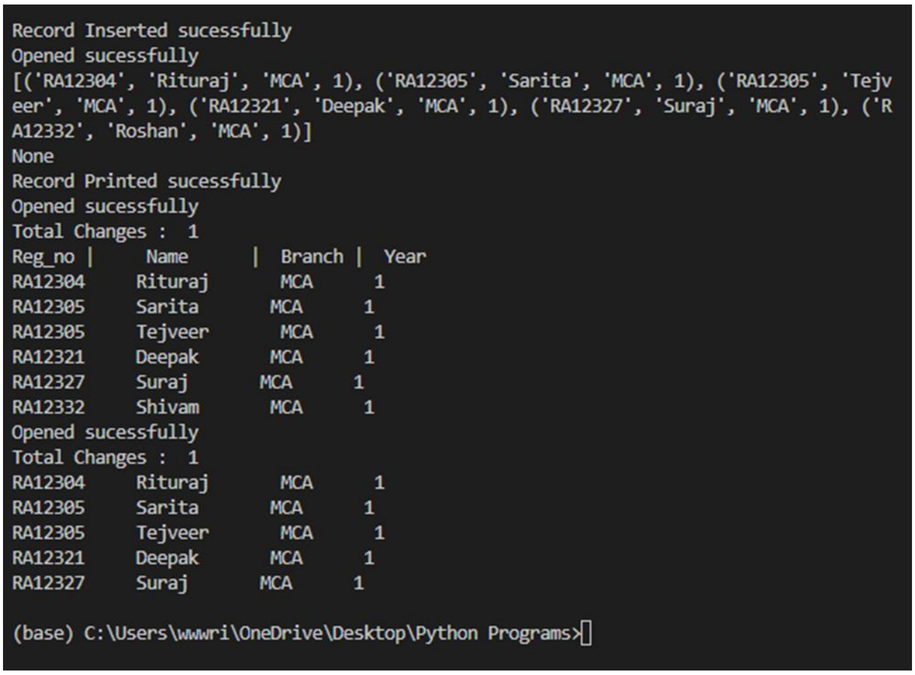
Code

```
import sqlite3
conn=sqlite3.connect('test5.db')
print('Opened sucessfully')

import sqlite3
conn=sqlite3.connect('test6.db')
print('Opened sucessfully')


command="create table student(Reg_no text,Name text,Branch text,Year int)"
conn.execute(command)
print("Command executed sucessfully")
# Insert data in table
import sqlite3
conn=sqlite3.connect('test6.db')
print('Opened sucessfully')

command="insert into student (Reg_no,Name,Branch,Year) values ('RA12304','Rituraj','MCA',1)"
conn.execute(command)
command="insert into student (Reg_no,Name,Branch,Year) values ('RA12305','Sarita','MCA',1)"
conn.execute(command)
command="insert into student (Reg_no,Name,Branch,Year) values ('RA12305','Tejveer','MCA',1)"
conn.execute(command)
command="insert into student (Reg_no,Name,Branch,Year) values ('RA12321','Deepak','MCA',1)"
conn.execute(command)
command="insert into student (Reg_no,Name,Branch,Year) values ('RA12327','Suraj','MCA',1)"
conn.execute(command)
command="insert into student (Reg_no,Name,Branch,Year) values ('RA12332','Roshan','MCA',1)"
conn.execute(command)
conn.commit()
print("Record Inserted sucessfully")


# Retreive record from table
import sqlite3
```

```
conn=sqlite3.connect('test6.db')
print('Opened sucessfully')

# ----It will print the object -----
command="select * from student"
result=conn.execute(command)
# print(result)

# ------- Print the list of tuples --------
r=result.fetchall()
print(r)

# ------- Print the first tuple -----------
r2=result.fetchone()
print(r2)


# for i in result:
#     print(i)

# print('Reg_no |     Name      |  Branch |  Year')
# for i in result:
#     Reg_no,Name,Branch,Year=i
#     print(Reg_no,"   ",Name,"     ",Branch,"    ",Year)

print("Record Printed sucessfully")

# Udation of record in table
import sqlite3
conn=sqlite3.connect('test6.db')
print('Opened sucessfully')

command="update student set Name='Shivam' where Reg_no='RA12332'"
result=conn.execute(command)
conn.commit()
print("Total Changes : ",conn.total_changes)
print('Reg_no |     Name      |  Branch |  Year')

result=conn.execute("select * from student")

for i in result:
    Reg_no,Name,Branch,Year=i
    print(Reg_no,"   ",Name,"     ",Branch,"    ",Year)

# To delete a particular record
import sqlite3
conn=sqlite3.connect('test6.db')
print('Opened sucessfully')
```

```
command="delete from student where Name='Shivam'"
conn.execute(command)
conn.commit()
print("Total Changes : ",conn.total_changes)

result=conn.execute("select * from student")
for i in result:
    Reg_no,Name,Branch,Year=i
    print(Reg_no,"   ",Name,"     ",Branch,"    ",Year)
```

Output…



```
Record Inserted sucessfully
Opened sucessfully
[('RA12304', 'Rituraj', 'MCA', 1), ('RA12305', 'Sarita', 'MCA', 1), ('RA12305', 'Tejv
eer', 'MCA', 1), ('RA12321', 'Deepak', 'MCA', 1), ('RA12327', 'Suraj', 'MCA', 1), ('R
A12332', 'Roshan', 'MCA', 1)]
None
Record Printed sucessfully
Opened sucessfully
Total Changes :  1
Reg_no |     Name      |  Branch |  Year
RA12304     Rituraj       MCA      1
RA12305     Sarita       MCA      1
RA12305     Tejveer       MCA      1
RA12321     Deepak       MCA      1
RA12327     Suraj       MCA      1
RA12332     Shivam       MCA      1
Opened sucessfully
Total Changes :  1
RA12304     Rituraj       MCA      1
RA12305     Sarita       MCA      1
RA12305     Tejveer       MCA      1
RA12321     Deepak       MCA      1
RA12327     Suraj       MCA      1

(base) C:\Users\wwwri\OneDrive\Desktop\Python Programs>
```

Result :- Successfully executed.

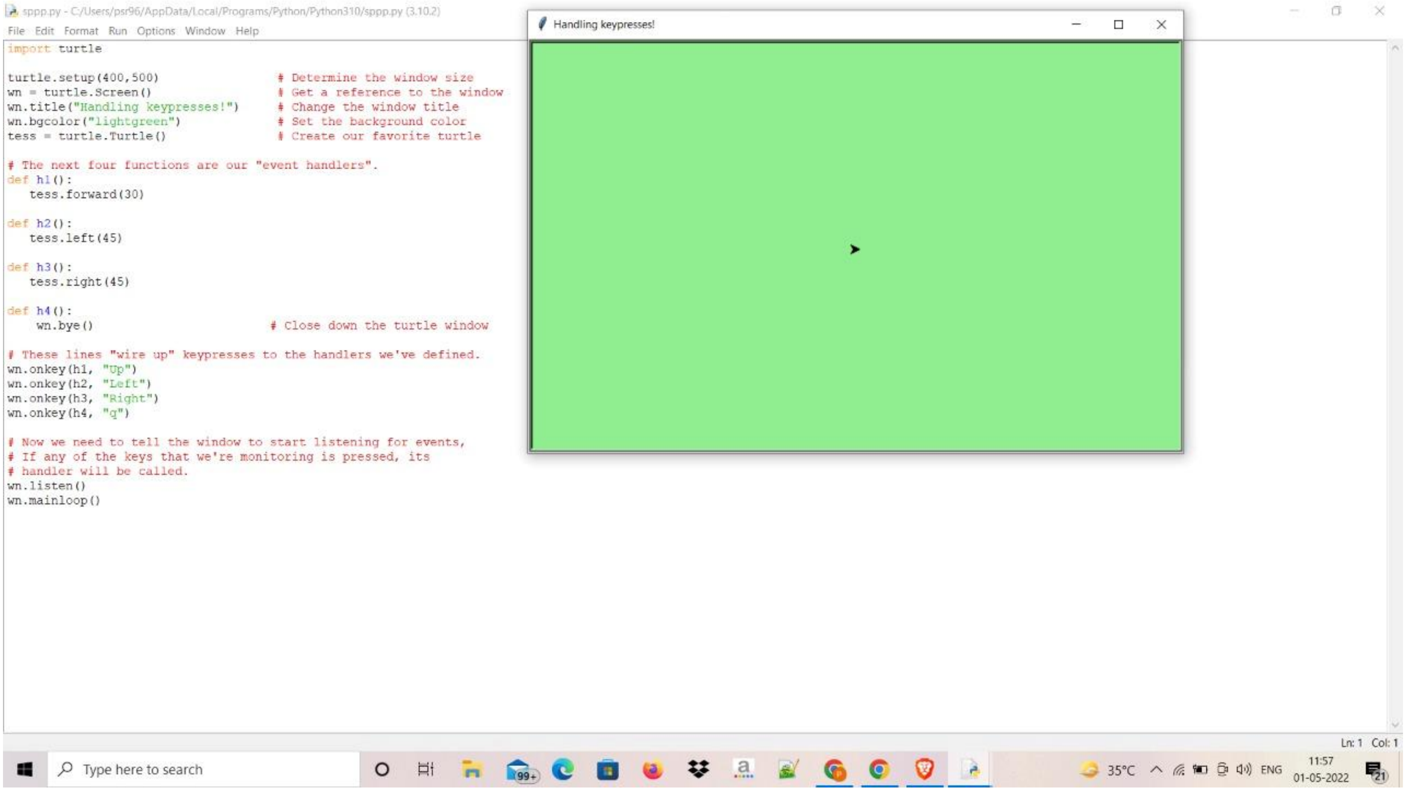
PROGRAM – 23

Aim :- Write an event driven program in python.

Code

```
import turtle

turtle.setup(400,500)              # Determine the window size
wn = turtle.Screen()               # Get a reference to the window
wn.title("Handling keypresses!")     # Change the window title
wn.bgcolor("lightgreen")            # Set the background color
tess = turtle.Turtle()              # Create our favorite turtle

# The next four functions are our "event handlers".
def h1():
   tess.forward(30)

def h2():
   tess.left(45)

def h3():
   tess.right(45)

def h4():
    wn.bye()                        # Close down the turtle window

# These lines "wire up" keypresses to the handlers we've defined.
wn.onkey(h1, "Up")
wn.onkey(h2, "Left")
wn.onkey(h3, "Right")
wn.onkey(h4, "q")

# Now we need to tell the window to start listening for events,
# If any of the keys that we're monitoring is pressed, its
# handler will be called.
wn.listen()
wn.mainloop()
```

Output..


sppp.py - C:/Users/psr96/AppData/Local/Programs/Python/Python310/sppp.py (3.10.2)
File Edit Format Run Options Window Help
Handling keypresses!
Ln: 1 Col: 1
Type here to search
35°C
ENG
11:57
01-05-2022

```
import turtle

turtle.setup(400,500)                # Determine the window size
wn = turtle.Screen()                 # Get a reference to the window
wn.title("Handling keypresses!")     # Change the window title
wn.bgcolor("lightgreen")             # Set the background color
tess = turtle.Turtle()               # Create our favorite turtle

# The next four functions are our "event handlers".
def h1():
   tess.forward(30)

def h2():
   tess.left(45)

def h3():
   tess.right(45)

def h4():
    wn.bye()                        # Close down the turtle window

# These lines "wire up" keypresses to the handlers we've defined.
wn.onkey(h1, "Up")
wn.onkey(h2, "Left")
wn.onkey(h3, "Right")
wn.onkey(h4, "q")

# Now we need to tell the window to start listening for events,
# If any of the keys that we're monitoring is pressed, its
# handler will be called.
wn.listen()
wn.mainloop()
```

Result:- Successfully Execute

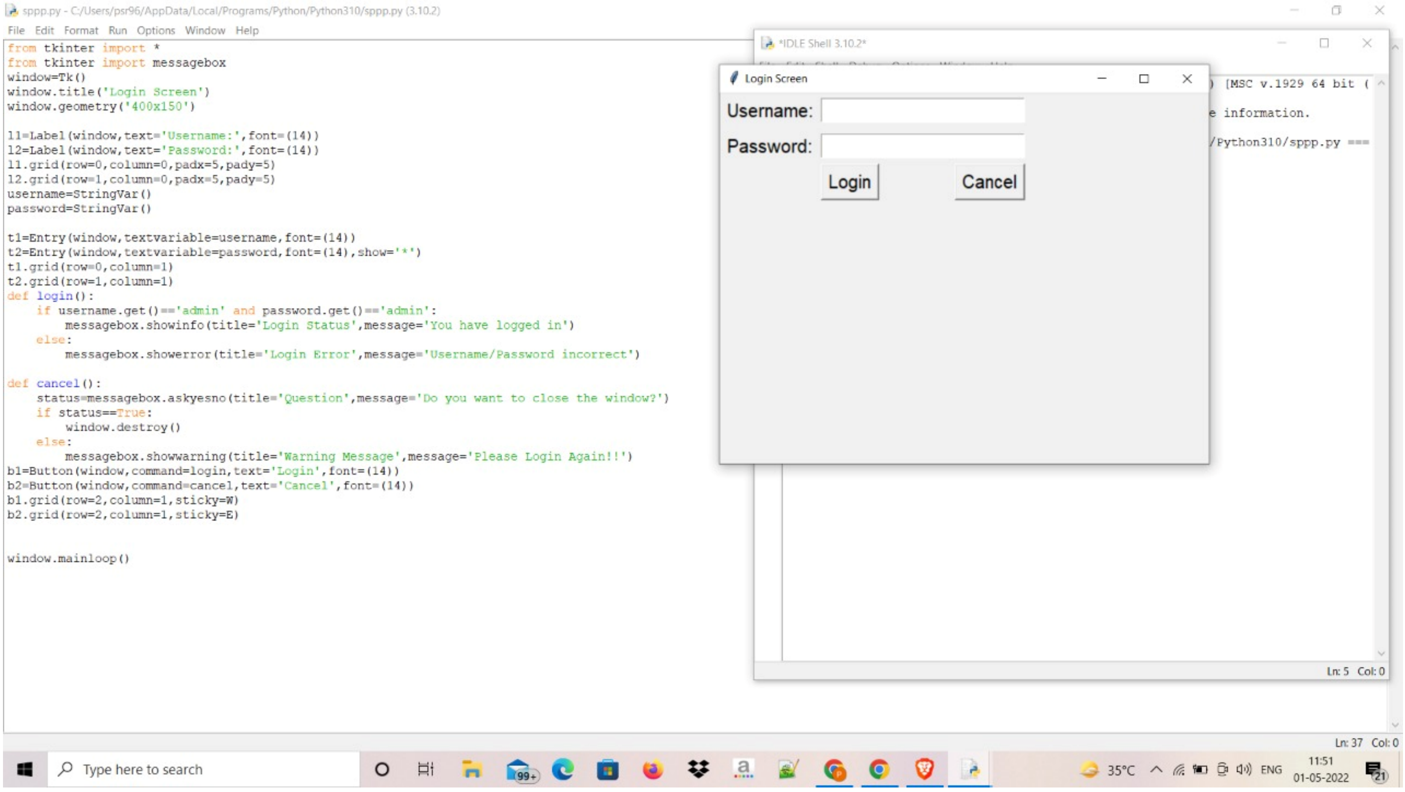
PROGRAM – 24

Aim :- Write a program to create a login window . Use dialogue boxes to display all the operations.

Code

```
from tkinter import *
from tkinter import messagebox
window=Tk()
window.title('Login Screen')
window.geometry('400x150')

l1=Label(window,text='Username:',font=(14))
l2=Label(window,text='Password:',font=(14))
l1.grid(row=0,column=0,padx=5,pady=5)
l2.grid(row=1,column=0,padx=5,pady=5)
username=StringVar()
password=StringVar()

t1=Entry(window,textvariable=username,font=(14))
t2=Entry(window,textvariable=password,font=(14),show='*')
t1.grid(row=0,column=1)
t2.grid(row=1,column=1)
def login():
    if username.get()=='admin' and password.get()=='admin':
        messagebox.showinfo(title='Login Status',message='You have logged in')
    else:
        messagebox.showerror(title='Login Error',message='Username/Password incorrect')

def cancel():
    status=messagebox.askyesno(title='Question',message='Do you want to close the window?')
    if status==True:
        window.destroy()
    else:
        messagebox.showwarning(title='Warning Message',message='Please Login Again!!')
b1=Button(window,command=login,text='Login',font=(14))
b2=Button(window,command=cancel,text='Cancel',font=(14))
b1.grid(row=2,column=1,sticky=W)
b2.grid(row=2,column=1,sticky=E)


window.mainloop()
```

Output..



sppp.py - C:/Users/psr96/AppData/Local/Programs/Python/Python310/sppp.py (3.10.2)

```
from tkinter import *
from tkinter import messagebox
window=Tk()
window.title('Login Screen')
window.geometry('400x150')

l1=Label(window,text='Username:',font=(14))
l2=Label(window,text='Password:',font=(14))
l1.grid(row=0,column=0,padx=5,pady=5)
l2.grid(row=1,column=0,padx=5,pady=5)
username=StringVar()
password=StringVar()

t1=Entry(window,textvariable=username,font=(14))
t2=Entry(window,textvariable=password,font=(14),show='*')
t1.grid(row=0,column=1)
t2.grid(row=1,column=1)
def login():
    if username.get()=='admin' and password.get()=='admin':
        messagebox.showinfo(title='Login Status',message='You have logged in')
    else:
        messagebox.showerror(title='Login Error',message='Username/Password incorrect')

def cancel():
    status=messagebox.askyesno(title='Question',message='Do you want to close the window?')
    if status==True:
        window.destroy()
    else:
        messagebox.showwarning(title='Warning Message',message='Please Login Again!!')
b1=Button(window,command=login,text='Login',font=(14))
b2=Button(window,command=cancel,text='Cancel',font=(14))
b1.grid(row=2,column=1,sticky=W)
b2.grid(row=2,column=1,sticky=E)


window.mainloop()
```

IDLE Shell 3.10.2

```
) [MSC v.1929 64 bit (
e information.
/Python310/sppp.py ===
```

Result:- Successfully Execute